

CT4000 Family

ChargePoint® Networked Charging Station



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963852741



Installation Guide

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions that must be followed during installation of a ChargePoint® Networked Charging Station.

Grounding instructions

The ChargePoint® Charging Station must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor is to be run with circuit conductors and connected to the equipment grounding terminal or lead on the Electric Vehicle Supply Equipment (EVSE). Connections to the EVSE shall comply with all applicable codes and ordinances.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, you will be required to correct the interference at your own expense.

Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. This device should be operated with a minimum distance of at least 20 cm between the 802.11 b/g/n and cellular antennas and a person's body and must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

Industry Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC/IC Compliance Labels

Go to <http://www.chargepoint.com/labels/>.

Safety and compliance

This document provides instructions to install the ChargePoint® Charging Station and should not be used for any other product. Before installing the ChargePoint® Charging Station, you should review this manual carefully and consult with a licensed contractor, licensed electrician and trained installation expert to ensure compliance with local building practices, climate conditions, safety standards, and all applicable codes and ordinances.

The ChargePoint® Charging Station should be installed only by a licensed contractor and a licensed electrician and in accordance with all local and national codes and standards. The ChargePoint® Charging Station should be inspected by a qualified installer prior to the initial use. Under no circumstances will compliance with the information in this manual relieve the user of his/her responsibility to comply with all applicable codes or safety standards. This document describes the most commonly-used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact ChargePoint, Inc. ChargePoint, Inc. is not responsible for any damages that may occur resulting from custom installations that are not described in this document.

No accuracy guarantee

Reasonable effort was made to ensure that the specifications and other information in this manual are accurate and complete at the time of its publication. However, the specifications and other information in this manual are subject to change at any time without prior notice.

Warranty information and disclaimer

Your use of, or modification to, the ChargePoint® Charging Station in a manner in which the ChargePoint® Charging Station is not intended to be used or modified will void the limited warranty. Other than any such limited warranty, the ChargePoint products are provided "AS IS," and ChargePoint, Inc. and its distributors expressly disclaim all implied warranties, including any warranty of design, merchantability, fitness for a particular purposes and non-infringement, to the maximum extent permitted by law.

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Contents

1 Introduction

Summary of Shipping Boxes	1-1
Installation Sequence	1-2
Before Installing	1-2
Specifications	1-3
Dual Circuit Wiring Diagram	1-4
Shared Power Wiring Diagram	1-5
Grounding Requirements	1-6

2 Installing a Bollard Mount

Before You Start	2-1
Overview of Steps	2-1
Step 1: Check Boxes for Correct Contents	2-2
Step 2: Prepare Pole/Base Plate for Mounting	2-3
Step 3: Mount Pole/Base Plate	2-4
Step 4: Install Main Body	2-5
Step 5: Prepare Retractor for Mounting	2-6
Step 6: Install Retractor	2-7
Step 7: Connect Wiring	2-8
Step 8: Check Voltages	2-9

3 Installing a Wall Mount

Before You Start	3-1
Overview of Steps	3-1
Step 1: Check Boxes for Correct Contents	3-2
Step 2: Drill Holes in Wall	3-3
Step 3: Mount Rear Brackets to Wall	3-4
Step 4: Prepare Retractor for Mounting	3-5
Step 5: Mount Retractor	3-6
Step 6: Install Conduit	3-7
Step 7: Install Main Body	3-8
Step 8: Connect Wiring	3-9
Step 9: Check Voltages	3-10

4	Installing the Head and Top Cap	
	Before You Start	4-1
	Overview of Steps	4-1
	Step 1: Check Boxes for Correct Contents	4-2
	Step 2: Prepare Head Assembly for Mounting	4-4
	Step 3: Slide Head Assembly Into Body	4-6
	Step 4: Connect Head Assembly	4-7
	Step 5: Verify the Station Operates Correctly	4-8
	Step 6: Install Cable Clamps	4-10
	Step 7: Secure Head Assembly	4-11
5	Preparing the Station for Activation on ChargePoint	
	Before You Start	5-1
	Overview of Steps	5-1
	Step 1: Pinpoint the Station	5-2
	Step 2: Document the Radio Groups	5-5
	Step 3: Complete the Post-Installation Checklist	5-6
6	Troubleshooting	
	Check the Station's Display	6-1
	Display Station Codes	6-1
	Description of Station Codes	6-2
	Charging Cable Doesn't Move Freely	6-5

Appendix A: Preparing the Installation Site for a Bollard Mount

Appendix B: Removing or Replacing the EV Charging Sign

Appendix C: CT4000 Power Sharing Instructions

Appendix D: Limited Product Warranty



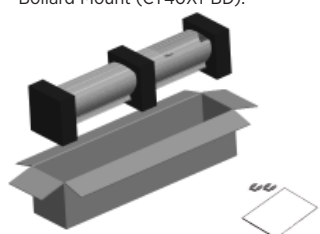
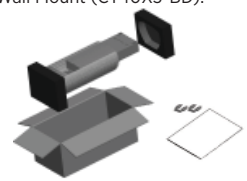
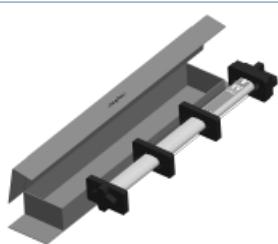

Introduction

1

This document provides step-by-step instructions on how to install a CT4000 ChargePoint® Charging Station.

Summary of Shipping Boxes

Each CT4000 charging station ships in four boxes:

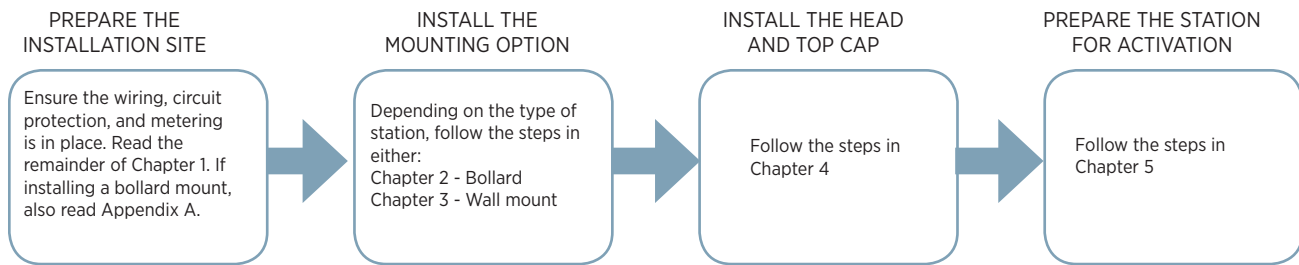
Assembly name...	Label on box says....	High level overview of box contents...	For Installation Instructions, see...
Top Cap  IMPORTANT: Open this box first—it contains the printed Installation Guide	CT40XX-CAP*		Chapter 4
Body	CT40X1-BD or CT40X3-BD Includes a power sharing kit (CT4020-PSHARE) that allows both ports on a dual port station to share a single 40A circuit.	Bollard Mount (CT40X1-BD):  Wall Mount (CT40X3-BD): 	Chapter 2 - Bollard Chapter 3 - Wall Mount
Cord Management Retractor	CT4000-CMK		Chapter 2 - Bollard Chapter 3 - Wall mount
Head	CT40X0-HD* or CT40X0-HD-GW* For gateway stations the box also includes a Network Enablement Kit, CT4000-NEK1 (US) or CT4000-NEK2 (Canada)		Chapter 4

**The last two digits of the four-digit model number depends on the station's features. The third digit (CT40X0) is "1" if the station has a single charging port, or "2" if the station has two charging ports. The last digit (CT401X) is either a 1 (bollard mount) or 3 (wall mount).*

NOTE: A more detailed list of the contents in each shipping box is provided in the associated chapter with the step-by-step installation instructions.

Installation Sequence

Regardless of the specific type of CT4000 charging station you are installing, and the options included, the high level installation sequence is the same:



Before Installing

- Ensure that the appropriate wiring, circuit protection, and metering is in place at the installation location by reviewing the specifications, wiring diagrams, and grounding requirements in the remainder of this chapter.
- Ensure that adequate CDMA (Verizon) or GSM (AT&T, Rogers) cellular coverage is available at the installation location. To ensure adequate signal strength in underground garages or other enclosed parking structures, cellular repeaters may be required.
- For bollard mount charging stations, prepare the installation site by following the instructions in Appendix A. The mounting template for the bollard is stapled into the center fold of this document and a PDF version is available at www.chargepoint.com/support-installation-guides.php. Ensure the PDF version is accurate by printing it at 100% scale on 11" x 17" paper and then verifying at least one dimension.
- Review the CT4000 Data Sheet (available at www.chargepoint.com/support-product-data-sheets.php).
- Review the contents of this document to familiarize yourself with the contents of each shipping box and the required installation steps.

Specifications

Electrical Input

	Single Port	Dual Port
AC Power Input Rating - Standard	208/240VAC 60Hz single phase @ 32A	208/240VAC 60Hz single phase @ 32A x 2
AC Power Input Rating - Power Sharing	n/a	208/240 VAC 60Hz single phase @ 32A
Input Power Connections - Standard	One 40A branch circuit.	Two independent 40A branch circuits.
Input Power Connections - Power Sharing	n/a	One 40A branch circuit
Required Service Panel Breaker - Standard	40A dual pole (non-GFCI type)	40A dual pole (non-GFCI type) x 2
Required Service Panel Breaker - Power Sharing	n/a	40A dual pole (non-GFCI type)
Service Panel GFCI	Do not provide external GFCI as it may conflict with internal GFCI (CCID)	
Wiring - Standard	3-wire (L1, L2, Earth)	5-wire (L1, L1, L2, L2, Earth)
Wiring - Power Sharing	n/a	3-wire (L1, L2, Earth)
Standby Power	15W typical (standby), 20W maximum (operation)	

Electrical Output

AC - Standard	7.2kW (240VAC @ 30A)	7.2kW (240VAC @ 30A) x 2
AC - Power Sharing	n/a	7.2kW (240VAC @ 30A) x 1 OR 3.8kW (240VAC @ 16A) x 2

Functional Interfaces

Plug(s) Type	SAE J1772™	SAE J1772™ x 2
Charging Cable Length	18' (5.5 meters)	18' (5.5 meters) x 2
Overhead Cable Management System	Yes	Yes
Card Reader	ISO 15693, 14443, NFC	
Locking Holster	Yes	Yes x 2

Safety and Connectivity Features

Ground Fault Detection	20mA CCID with auto retry
Open Safety Ground Detection	Continuously monitors presence of safety (green wire) ground connection
Plug-Out Detection	Power terminated per SAE J1772™ specifications
Power Measurement Accuracy	+/- 2% from 2% to full scale (32A)
Power Report/Store Interval	15 minute, aligned to hour
Local Area Network	2.4 GHz Wi-Fi (802.11 b/g/n)
Wide Area Network	3G GSM, 3G CDMA

Safety and Operational Ratings

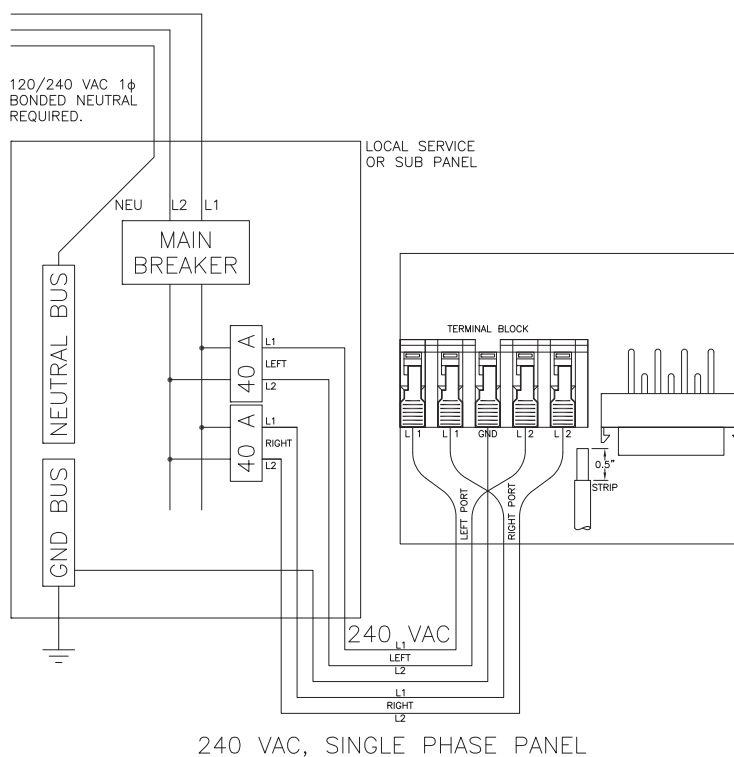
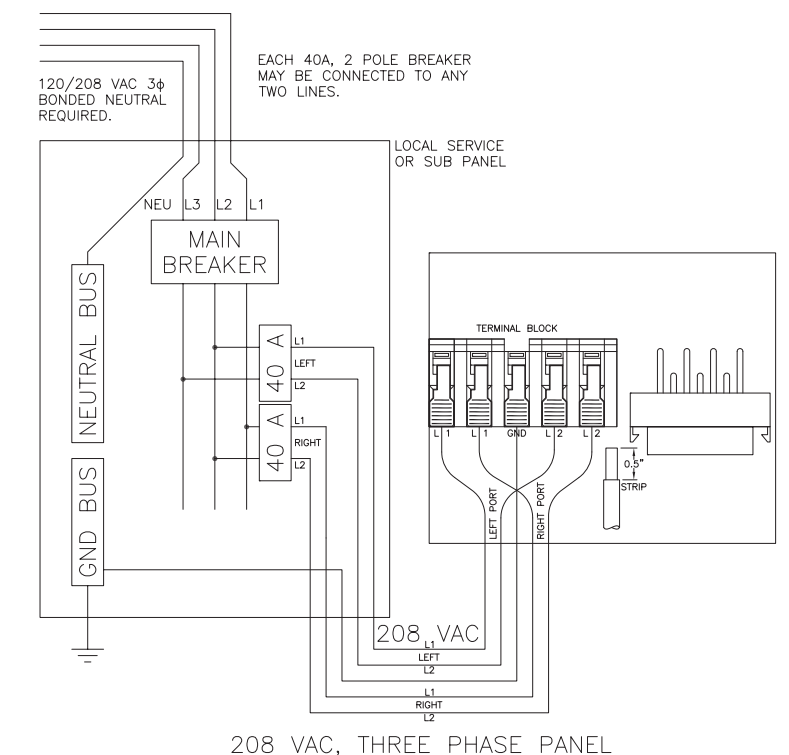
Enclosure Rating	Type 3R per UL 50E
Safety Compliance	UL listed for USA and cUL certified for Canada; Complies with UL 2594, UL 2231-1, UL 2231-2, and NEC Article 625
Surge Protection	6kV @ 3000A. In geographic areas subject to frequent thunder storms, supplemental surge protection at the service panel is recommended.
EMC Compliance	FCC Part 15 Class A
Operating Temperature	-22°F to 122°F (-30°C to +50°C)
Operating Humidity	up to 85% @ +50°C (122°F) non-condensing
Non-operating Humidity	up to 95% @ +50°C (122°F) non-condensing
Terminal Block Temperature Rating	221°F (105°C)
Maximum Charging Stations per 802.11 Radio Group	10. Each station must be located within 150 feet "line of sight" of a gateway station.

ChargePoint, Inc. reserves the right to alter product offerings and specifications at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

Dual Circuit Wiring Diagram

The following illustration describes the wiring for installing a CT4000 on a dual circuit. Wiring for a single circuit installation is described on the next page. Grounding requirements are described on page 1-6.

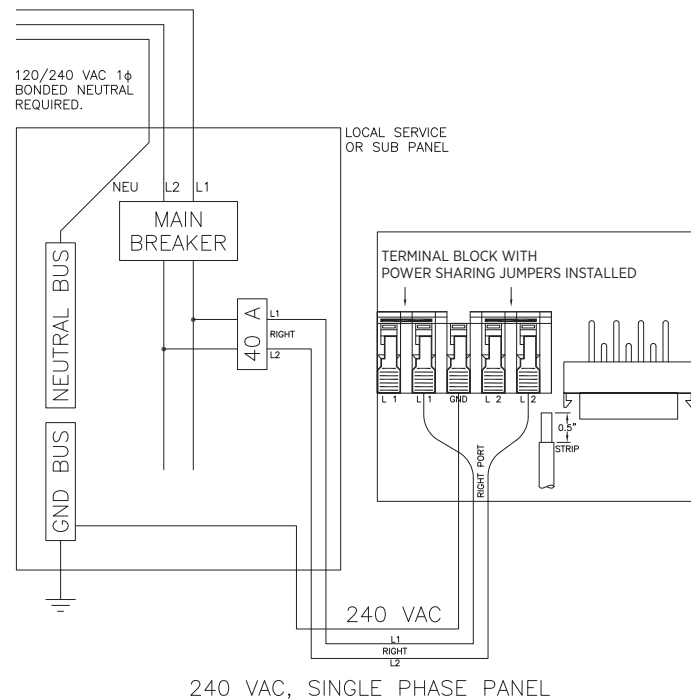
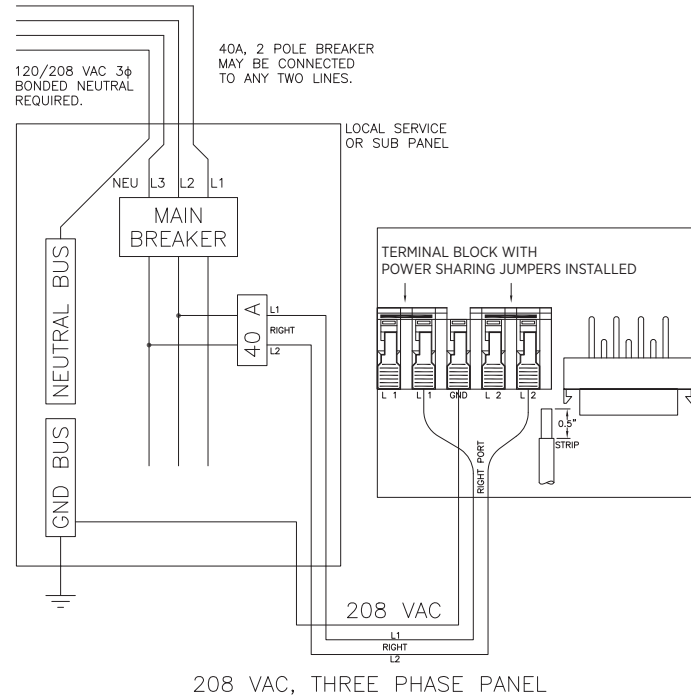
NOTE: Requires two dedicated circuits, each with its own two pole 40 A breaker.



Shared Power Wiring Diagram

The following illustration describes the wiring for installing a dual port CT4000 on a shared single circuit. For this installation, you will need the power sharing kit to allow both ports to share a two pole 40A circuit breaker. Wiring connections are provided in Appendix C. Grounding requirements are described on page 1-6.

Wiring for a dual circuit installation, see the previous page.



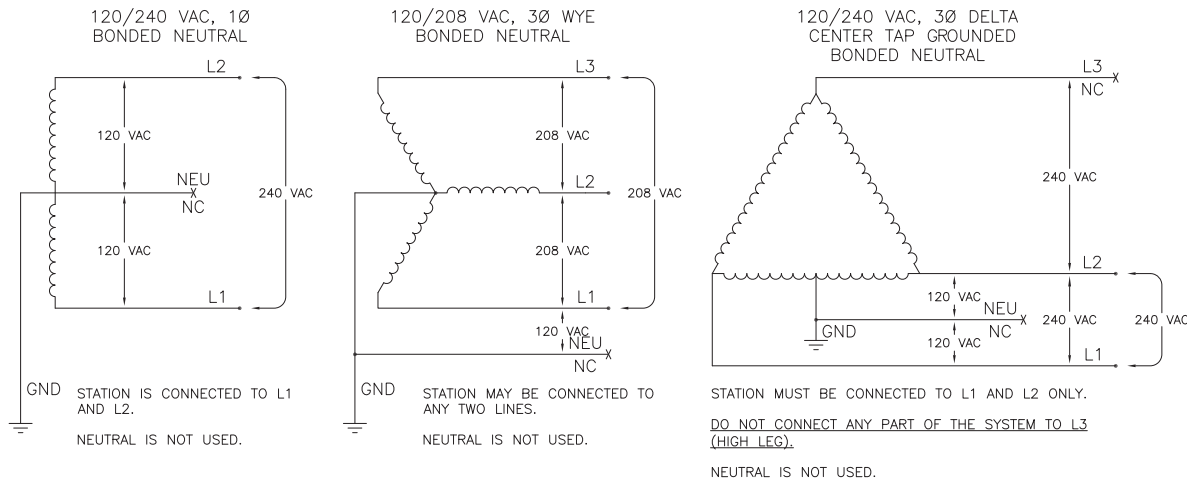
Grounding Requirements

The voltage of either line, relative to ground, must not fall below 80 volts or a Floating Line Connection error occurs (see page 6-3). Because the voltage of either line relative to ground must not be allowed to fluctuate, use only center-grounded systems. Neutral is not used to power the station but must be properly connected to ground, at the panel or transformer, to provide the necessary voltage reference relative to ground.

Connect to these systems

In a wye system, connect the station to ANY two lines, as shown below.

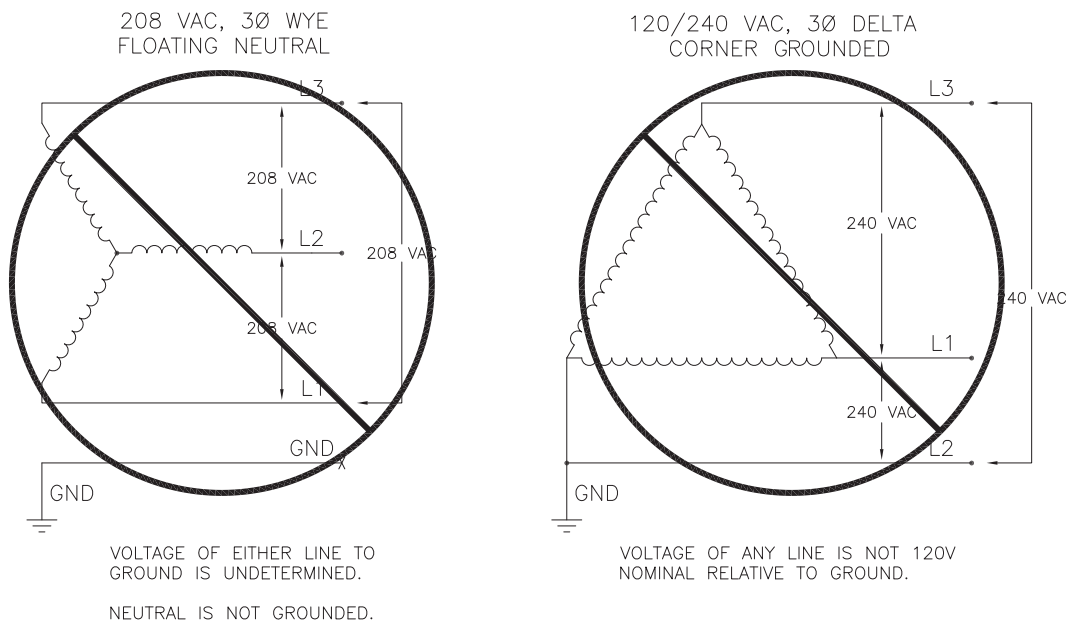
In a delta system, connect the station to a center-tapped secondary only, where the center tap is bonded and the station is connected to L1 and L3. This allows voltages to remain constant regardless of other loads that may be using the lines.



Do not connect to these systems

Do not connect ChargePoint stations to the following types of power sources:

- 120/208 VAC 3 phase wye, ungrounded
- 120/240 VAC 3 phase delta, corner-grounded
- Any system where the center point of the AC power source is not grounded



Installing a Bollard Mount

2

Before You Start

Before installing a bollard mount, prepare the installation site as described in Appendix A. After preparing the installation site, you need the following:

- Ratchet and 3/8" socket
- 1/2" drive torque wrench and 15/16" 6-point deep socket (for 5/8-11 nut)
- Crescent wrench
- Bubble level
- #2 Phillips screwdriver
- Wire stripper
- Multimeter

Overview of Steps

Installing the bollard mount involves a few simple steps, summarized below and detailed in the remainder of this chapter:

1. Check Boxes for Correct Contents (page 2-2)
2. Prepare Pole/Base Plate for Mounting (page 2-3)
3. Mount Pole/Base Plate (page 2-4)
4. Install Main Body (page 2-5)
5. Prepare Retractor for Mounting (page 2-6)
6. Install Retractor (page 2-7)
7. Connect Wiring (page 2-8)
8. Check Voltages (page 2-9)

When you have completed these steps, you will be ready to install the head and top assemblies as described in Chapter 4.

Step 1: Check Boxes for Correct Contents

The bollard mount ships in two boxes as described below.

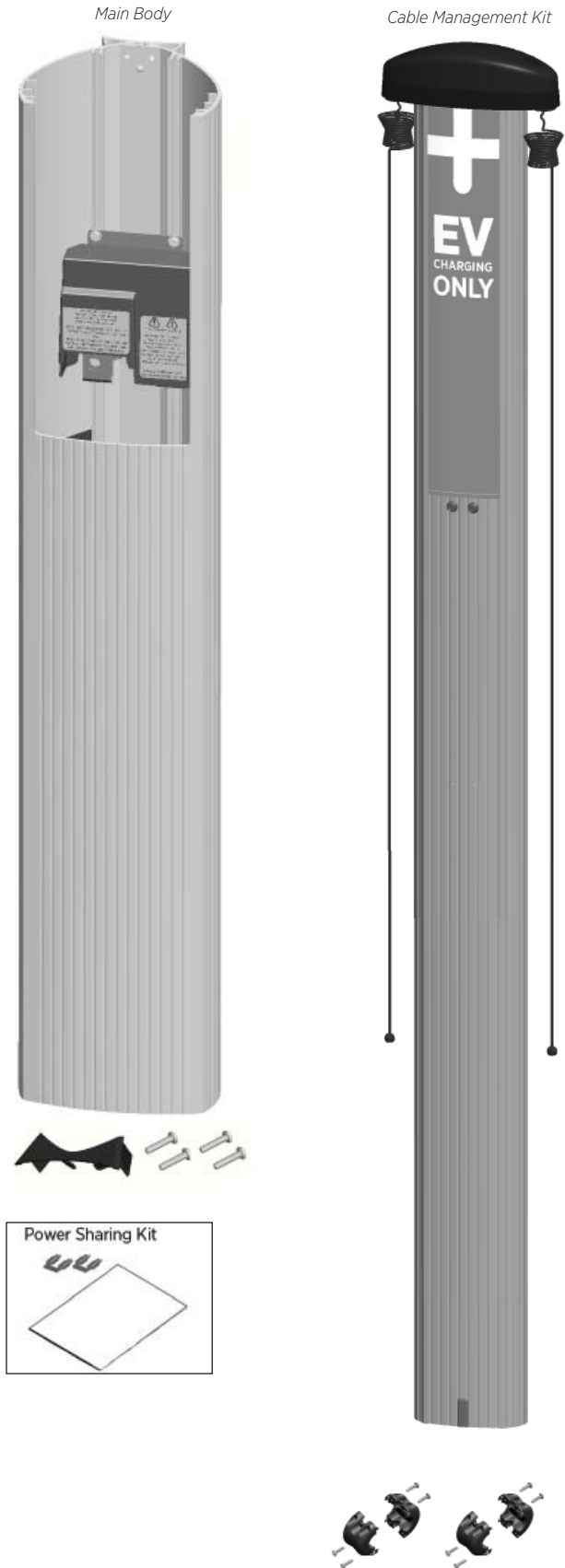
Main Body

- Main body, pre-assembled with mounting pole/base plate, rubber bumper, and brackets (1)
- Adapter plastic cap (1)
- ¼"-20 x 1 ¼" screws (4)
- Power sharing kit (use only if installing a dual-port station on a single 40A circuit) (1)

Cable Management Kit

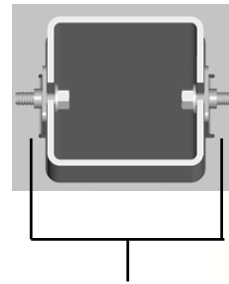
- Retractor assembly with pre-installed "EV CHARGING ONLY" sign (1)
- Cable clamps (4)
- Phillips screws (10*)

*Two extra screws are included.



Step 2: Prepare Pole/Base Plate for Mounting

- Use a 3/8" socket wrench to loosen (but not remove) the two screws holding the pole inside the bollard.
- Remove the pole/base plate assembly from the main body by pulling it out from the bottom.
- Remove and discard the cardboard shipping spacer.



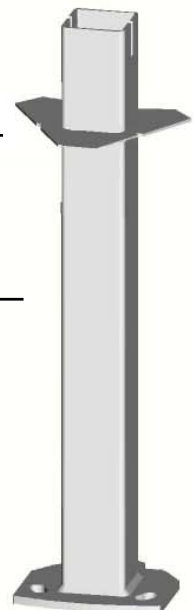
Loosen the 2 screws
(don't remove)



Rubber
bumper

Pole

Base
plate

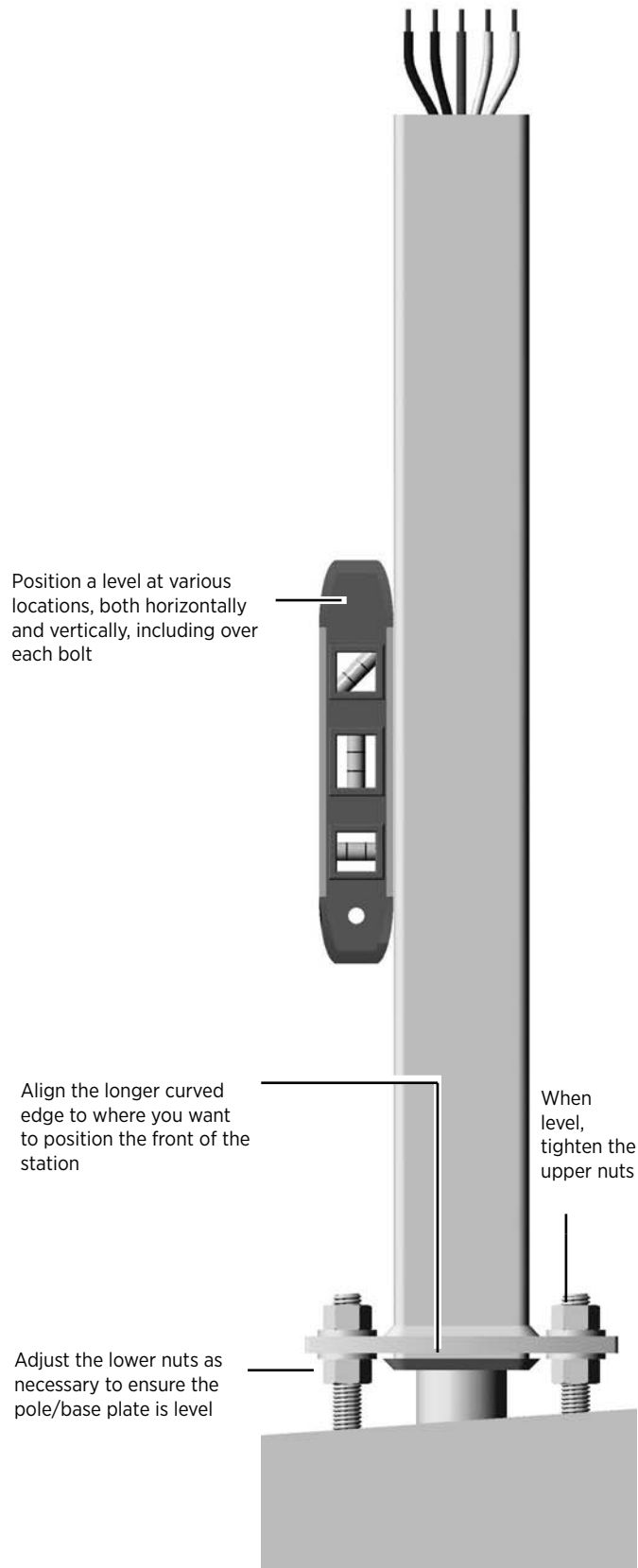


Step 3: Mount Pole/Base Plate

Prepare the installation site as described in Appendix A, then mount the pole/base plate assembly as follows:

- Pull wires through conduit.
- Place the pole/base plate assembly over the conduit, ensuring the long curved edge of the base plate is located where you want the front of the charging station located.
- Adjust the lower nuts as necessary to ensure the mounting pole is level.
- When level, tighten the nuts on top of the base plate to at least 115-120 ft-lbs.

⚠ IMPORTANT: Ensure the pole/base plate is level by adjusting the nuts underneath the base plate. Verify accuracy after each adjustment by positioning the level at various locations on the pole, above each bolt.



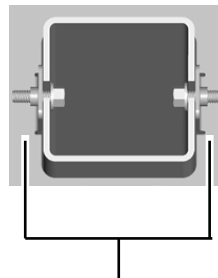
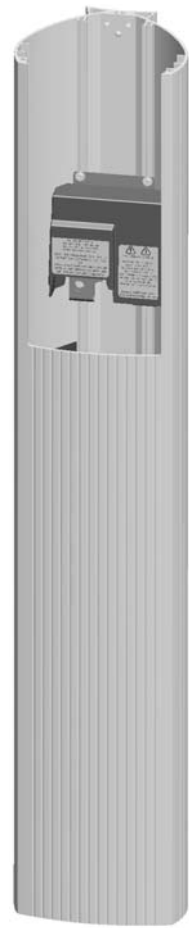
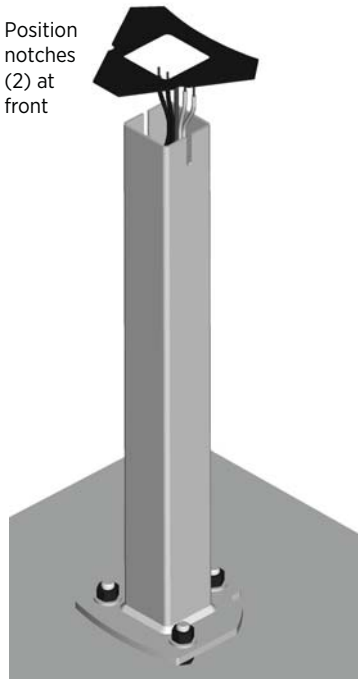
Step 4: Install Main Body

To install the main body:

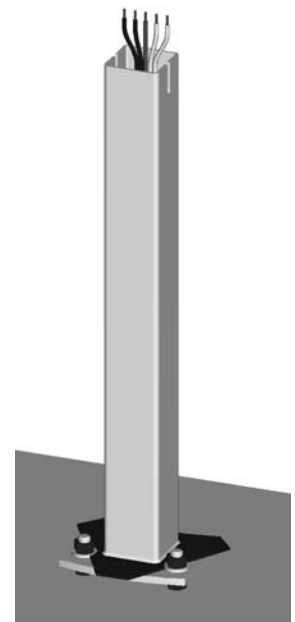
- Align the notches on the rubber bumper with the front mounting nuts, then slide it all the way down the pole until it is flush with the base plate. This prevents any rocking motion between the main body and the base plate.
- Slide the body over the mounting pole.
- Re-tighten the screws you loosened in Step 2 to approximately 80 in-lbs using a 3/8" socket wrench.

⚠ IMPORTANT: Ensure the body is firmly aligned to the bottom surface and that no movement (rocking) can take place, even when significant pressure is applied.

Position
notches
(2) at
front



Re-tighten the 2 screws



Step 5: Prepare Retractor for Mounting

To prepare the retractor for mounting:

- Position the retractor packaging so that the bottom of the retractor is near the base of the bollard.

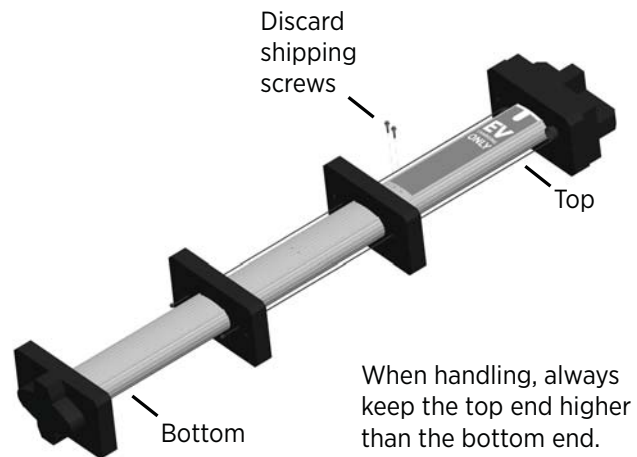


IMPORTANT: Do not unwrap the cords.

- Remove and discard the two shipping screws from the front face of the retractor.

NOTE: When you remove the shipping screws, the retractor's counterweights are free to move in either direction. Therefore, **do not tilt or carry the retractor assembly with the top end lower than the bottom end.**

- Remove the foam packaging from the retractor.
- OPTIONAL: If necessary, remove or replace the EV PARKING sign. See Appendix B.



Step 6: Install Retractor

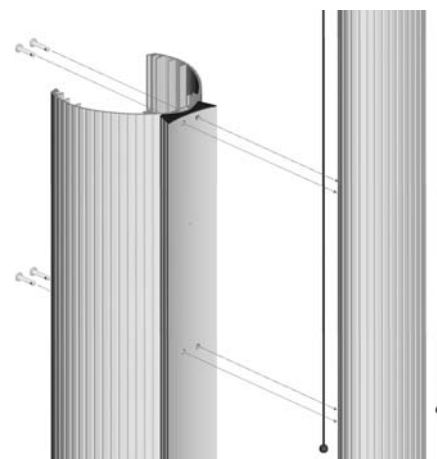
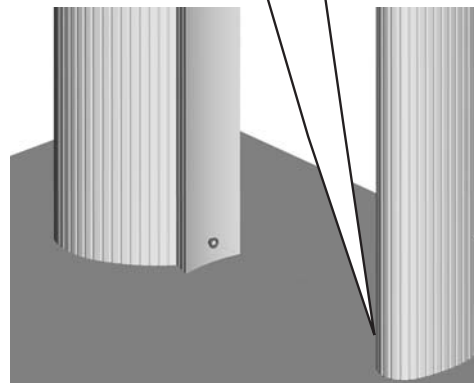
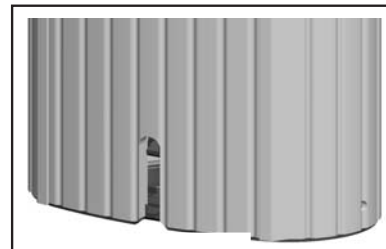
To install the retractor:

- Insert the black cap into the space at the top of the main body, between the main body and the retractor, as shown.
- With a Phillips screwdriver and at least one of the four ¼" - 20 x 1 ¼" screws in hand, position the retractor against the back of the main body. Place the slot at the bottom of the retractor over the knob at the bottom of the main body, as shown.



IMPORTANT: Hold the retractor in place until you've secured it with at least one screw.

- From inside the main body, insert the four ¼" - 20 x 1 ¼" screws through the main body and the retractor, and tighten to 60 in-lbs.



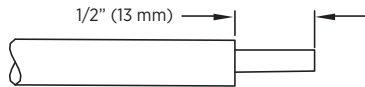
Step 7: Connect Wiring



IMPORTANT: To power a dual-port station using a single 40A circuit, use the Power Sharing Kit (CT4020-PSHARE) provided in the shipping box with the main body. Instead of following the instructions below, see Appendix C. You must also manually configure the station for power sharing, as described in Appendix C.

If you are not installing a power sharing kit, connect the wiring as follows:

- Strip wires ½" (13 mm).



- Push the black tab on the terminal block to release the terminal block cover, then slide the cover up until it locks into the raised position:



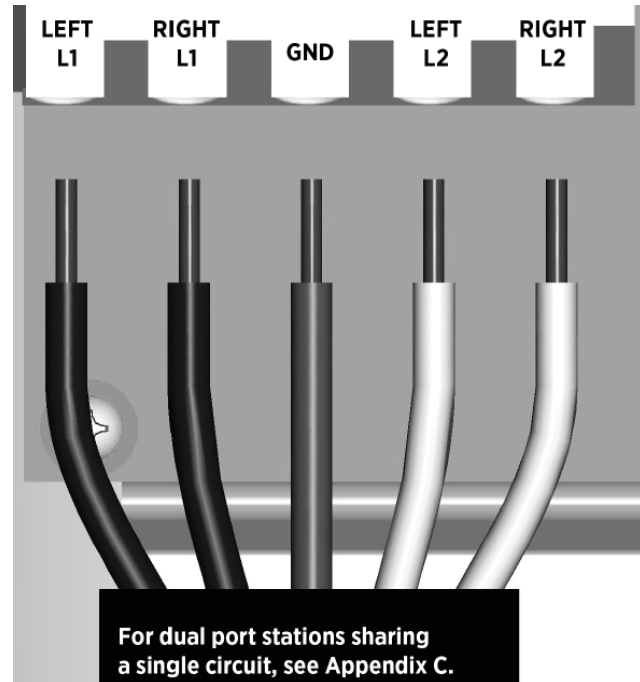
- Lift the corresponding white lever on the terminal block, insert the ground wire into the center connector, then push the lever down until it clicks into its fully closed position.
- Lift the corresponding white levers, insert the 240 VAC L1 and L2 wires, then push the levers down until they click into their fully closed position.



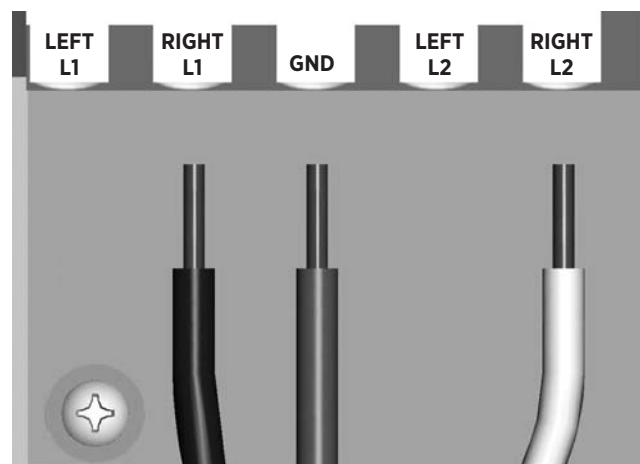
WARNINGS:

- Use copper conductors only.
- Do NOT provide GFCI protection at panel. The CT4000 has built-in GFCI protection.
- In areas with frequent thunder storms, add surge protection at the service panel for all circuits.
- Use new circuit breakers only. Used breakers can damage equipment and introduce the potential for an electrical fire.**
- Ensure all power and ground connections, especially those at the breaker and buss bar, are clean and tight. Remove all oxide from all conductors and terminals before connecting wiring.**

For dual port stations:



For single port stations, use the connectors indicated for "RIGHT" side only.



Step 8: Check Voltages

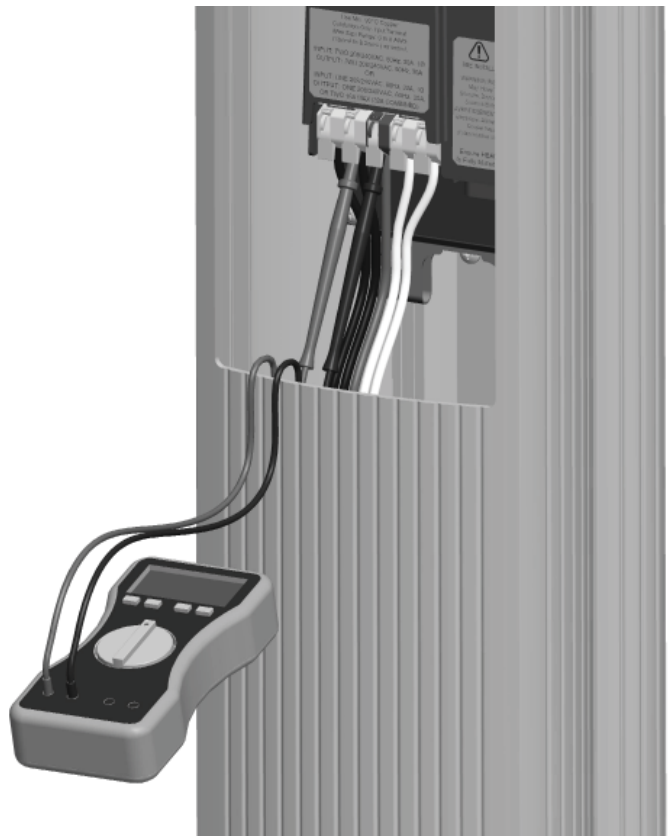
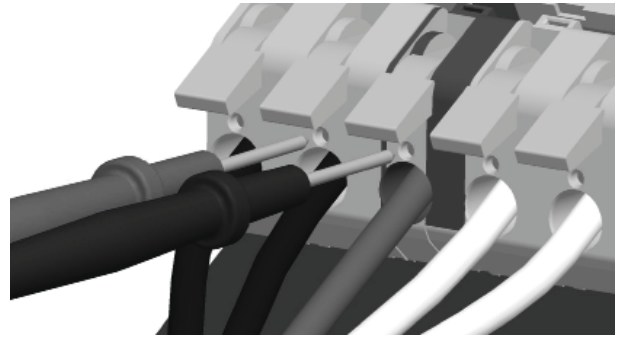
- Turn power ON.
- Using a solenoid type voltage tester, check that the voltages at the charging station's terminal block are as follows:

Measure Between	Volts
L1 and L2	208/240
GND and L1	120
GND and L2	120

If the voltages are not as expected, ensure that the wiring has been properly connected as describing on the previous page. For detailed wiring diagrams and grounding requirements, see pages 1-4 to 1-6.

Before continuing, resolve any wiring issues and ensure that voltages are as expected.

- Turn power OFF.



You have now finished installing the bollard mount and are ready to install the head assembly and top cap. See Chapter 4.



Installing a Wall Mount

3

Before You Start

You need the following:

- Drill and Tap for appropriate wall attachment hardware
- Attachment hardware, such as 3/8" (9.5 mm) x 3" (76 mm) lag bolts if mounting to a wood wall
- Ratchet and 9/16" deep socket
- #2 Phillips screwdriver
- Tape measure
- Bubble level
- Marker
- Wire stripper
- Multimeter

Overview of Steps

Installing the wall mount involves a few simple steps, summarized below and detailed in the remainder of this chapter:

1. Check Boxes for Correct Contents (page 3-2)
2. Drill Holes in Wall (page 3-3)
3. Mount Rear Brackets to Wall (page 3-4)
4. Prepare Retractor for Mounting (page 3-5)
5. Mount Retractor (page 3-6)
6. Install Conduit (page 3-7)
7. Install Main Body (page 3-8)
8. Connect Wiring (page 3-9)
9. Check Voltages (page 3-10)

When you have completed these steps, you will be ready to install the head and top cap as described in Chapter 4.

Step 1: Check Boxes for Correct Contents

The wall mount ships in two boxes as described below.

Main Body and Mounting Kit

- Main body, pre-assembled (1)
 - Mounting brackets with pre-installed screws and flange bolts (2 sets)
- NOTE: The packing box for the brackets serves as a template for drilling mounting holes. **Do not discard packaging until you've completed Step 2.**
- Slot cover (2)*
 - Power sharing kit (use only if installing a dual-port station on a single 40A circuit) (1)

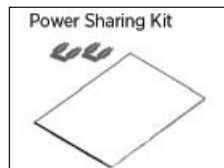
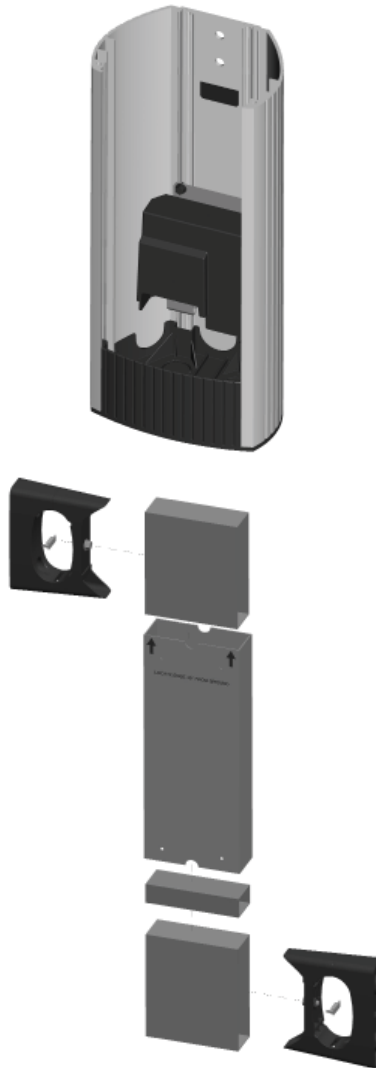
*One extra slot cover is included.

Cable Management Kit

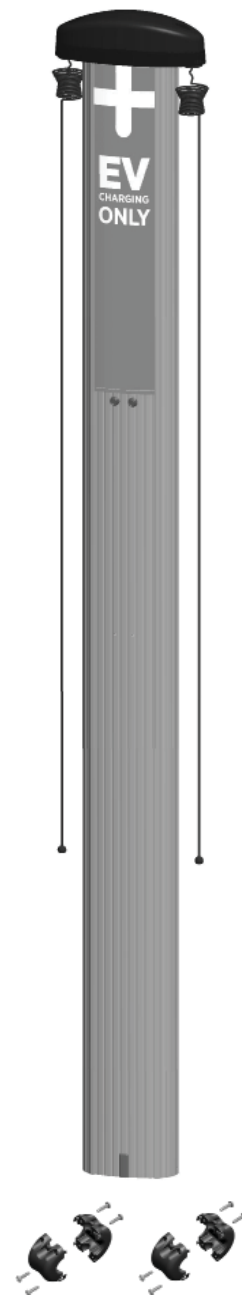
- Retractor assembly (1)
- Cable clamps (4)
- Phillips screws (10**)

**Two extra screws are included.

Main Body and Mounting Kit



Cable Management Kit

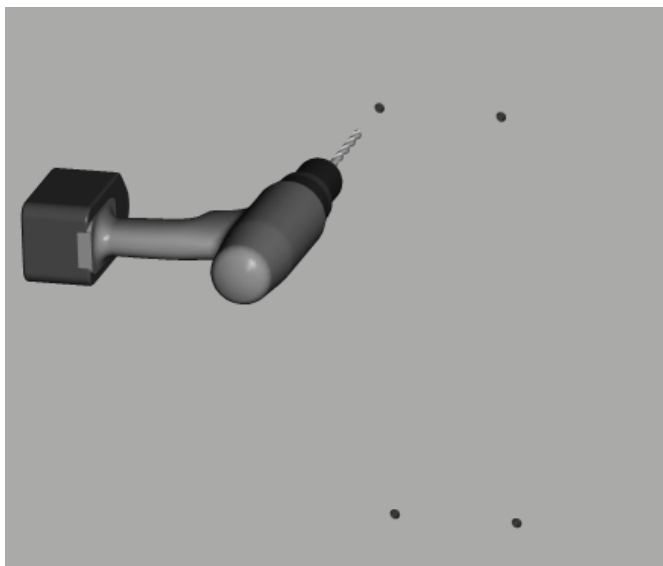
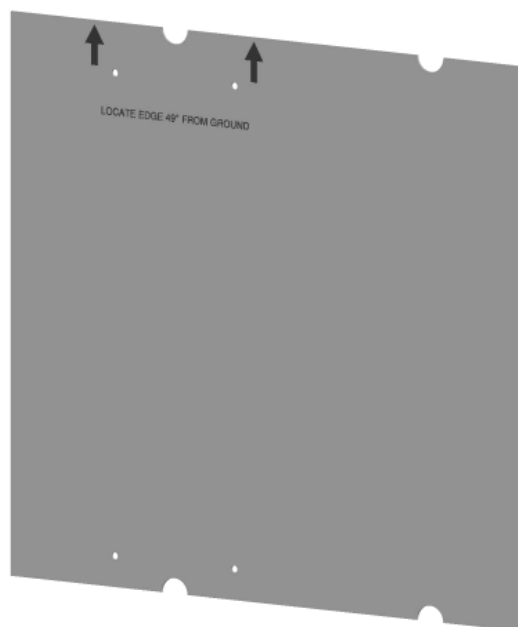


Step 2: Drill Holes in Wall

- The packing box for the brackets is used as a template for drilling the wall holes. Tear the packing box along the perforation to allow it to lay flat.
- Place the template against the wall. As described on the package insert, align the top where indicated, 49" above the floor or ground. Ensure that the template is level and the side of the packaging insert is plumb. Mark the four mounting holes.
- Drill four holes in the wall at the marked locations.

NOTE:

- If mounting to a hollow wall, bridge at least two studs using a 1 5/8" channel strut. For wood studs, use 3/8" (9.5 mm) lag bolts that are long enough to penetrate at least 2 1/2" into the stud. Then mount the supplied brackets to the channel strut using 3/8-16 x 1" long bolts, 3/8 ID x 13/16" OD washers, and 3/8-16 channel strut nuts.
- If mounting to a masonry wall, use 3/8" (9.5 mm) expanding masonry fasteners.
- If mounting to a wood wall, use 3/8" (9.5 mm) x 3" (76 mm) lag bolts.



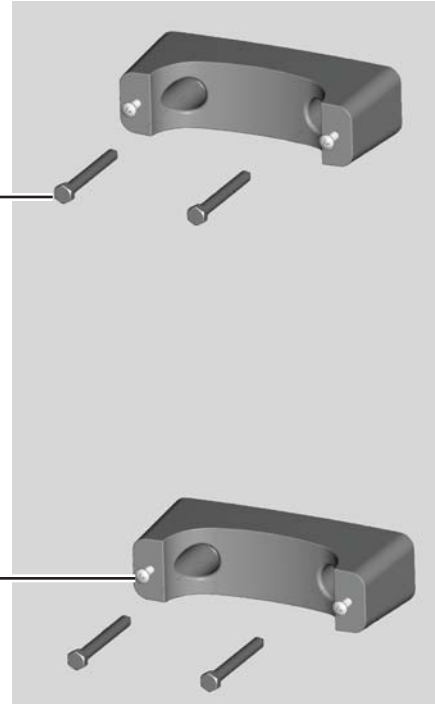
Step 3: Mount Rear Brackets to Wall

Mount each bracket to the wall using screws appropriate for the type of wall material.

Partially insert the 1/4" - 20 screws into the rear brackets. Do not fully insert these screws—leave about 3/4" protruding.

Mount brackets using screws appropriate for type of wall material (not supplied)


Partially insert the four supplied 1/4"-20 screws



Step 4: Prepare Retractor for Mounting

To prepare the retractor for mounting:

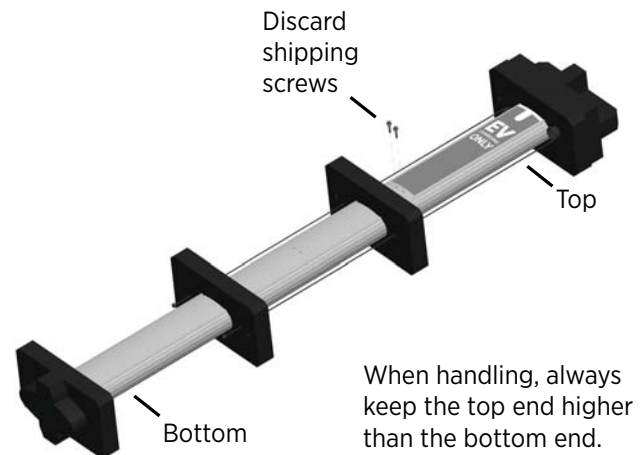
- Position the retractor packaging so that the bottom of the retractor is near the bottom of the wall.

 **IMPORTANT:** Do not unwrap the cords.

- Remove and discard the two shipping screws from the front face of the retractor.

NOTE: When you remove the shipping screws, the retractor's counterweights are free to move in either direction. Therefore, **do not tilt or carry the retractor assembly with the top end lower than the bottom end.**

- Remove the foam packaging from the retractor.
- OPTIONAL: If necessary, remove or replace the EV PARKING sign. See Appendix B.



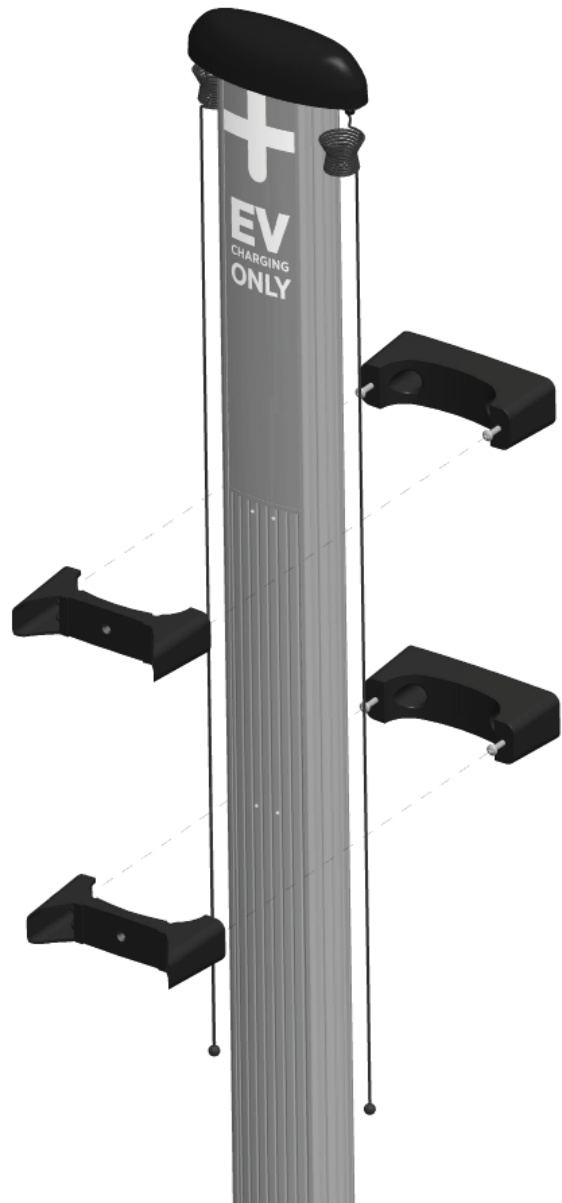
Step 5: Mount Retractor

To mount the retractor assembly:

- Place the two front brackets where you can easily reach them.
- Tilt the retractor up against the rear brackets, with the front of the retractor facing towards you, as shown (mount holes visible).

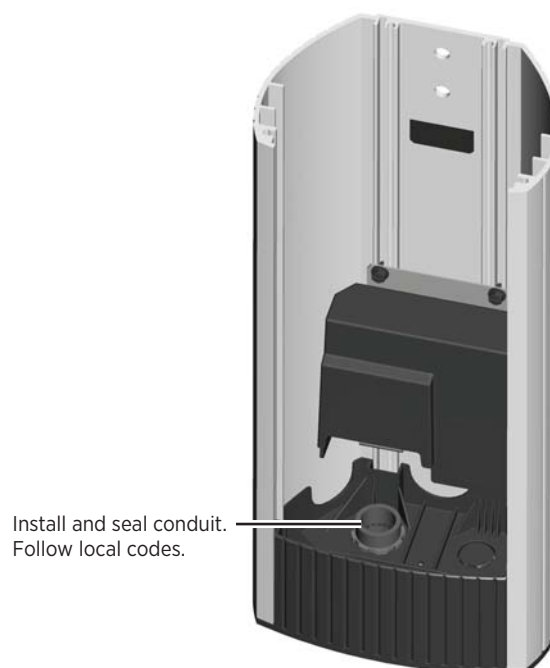
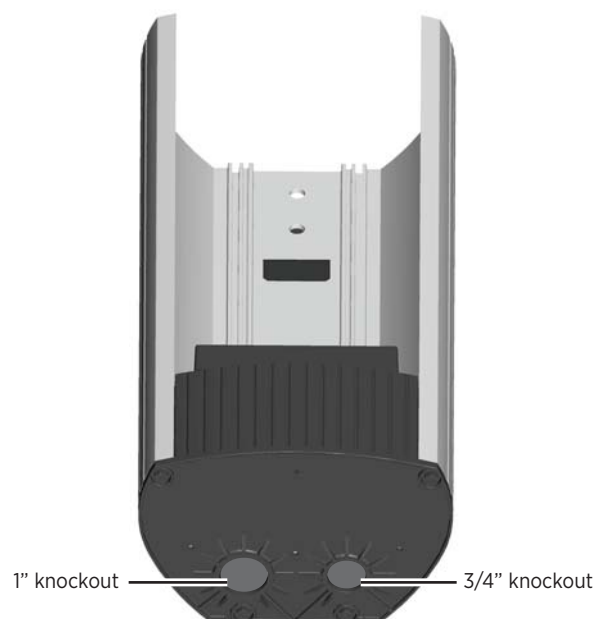
NOTE: The bottom of the retractor should rest on the ground.

- Place the top front bracket over the two corresponding screws protruding from the top rear bracket. You'll need to steady the retractor with one hand, while using the other hand to position the bracket.
- Repeat for the bottom bracket.
- Tighten all four screws to 60 in-lbs using the Phillips screwdriver.
- Insert the slot cover, bottom first, into the slot at the bottom of the retractor.



Step 6: Install Conduit

As shown, the base of the main body has two conduit knockouts: 1" and 3/4". Using a flat screwdriver, remove the knockout that suits your installation needs.

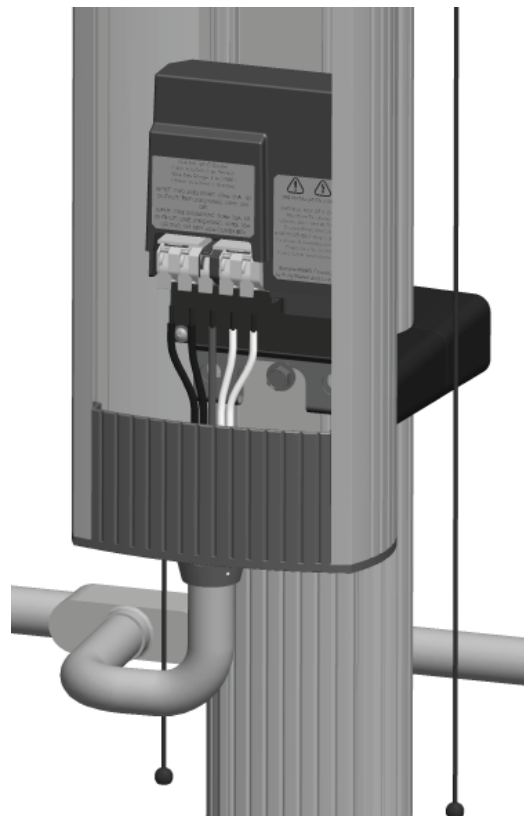
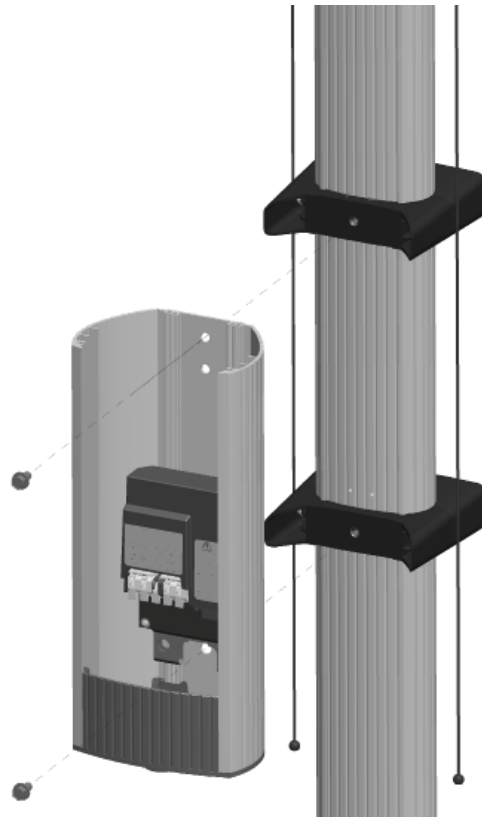


Step 7: Install Main Mody

- Expose the pre-drilled hole located below the terminal block. To do so, push the tab on the terminal block to release the cover plate, then slide the cover plate upwards:



- Position the main body so that the top hole aligns with the top retractor bracket.
- Insert a 3/8" - 16 x 3/4" flange bolt into the top hole and finger tighten.
- Insert the other flange bolt into the lower mounting hole.
- Tighten both flange bolts to 150 in-lbs.
- Connect the conduit and run wiring through the conduit and into the main body of the station.

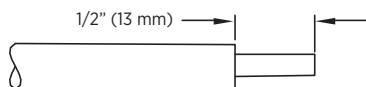


Step 8: Connect Wiring

! IMPORTANT: To power a dual-port station using a single 40A circuit, use the Power Sharing Kit (CT4020-PSHARE) provided in the shipping box with the main body. Instead of following the instructions below, see Appendix C. You must also manually configure the station for power sharing, as described in Appendix C.

If you are not installing a power sharing kit, connect the wiring as follows:

- Strip wires $\frac{1}{2}$ " (13 mm).



- Push the black tab on the terminal block to release the terminal block cover, then slide the cover up until it locks into the raised position:

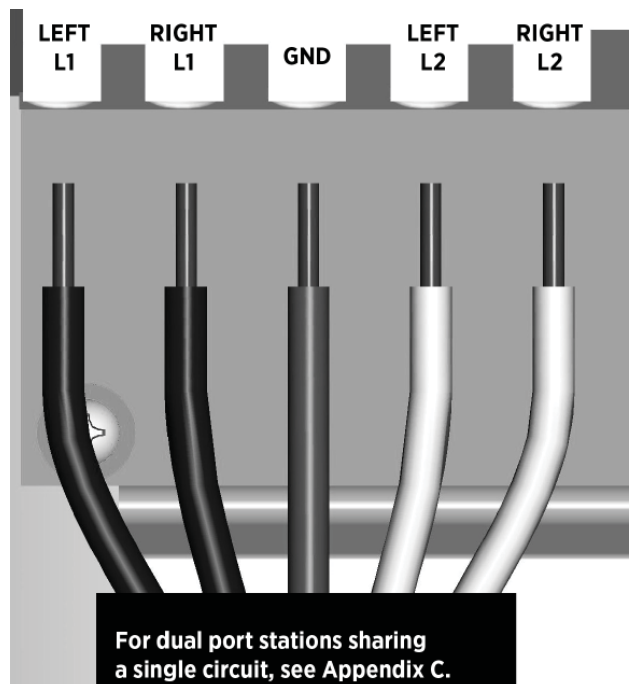


- Lift the corresponding white lever on the terminal block, insert the ground wire into the center connector, then push the lever down until it clicks into its fully closed position.
- Lift the corresponding white levers, insert the 240 VAC L1 and L2 wires, then push the levers down until they click into their fully closed position.

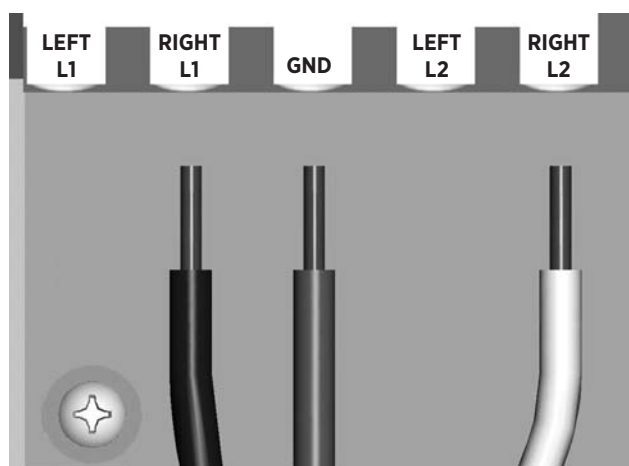
! WARNINGS:

- Use copper conductors only.
- Do NOT provide GFCI protection at panel. The CT4000 has built-in GFCI protection.
- In areas with frequent thunder storms, add surge protection at the service panel for all circuits.
- Use new circuit breakers only. Used breakers can damage equipment and introduce the potential for an electrical fire.**
- Ensure all power and ground connections, especially those at the breaker and buss bar, are clean and tight. Remove all oxide from all conductors and terminals before connecting wiring.**

For dual port stations:



For single port stations, use the connectors indicated for "RIGHT" side only.



Step 9: Check Voltages

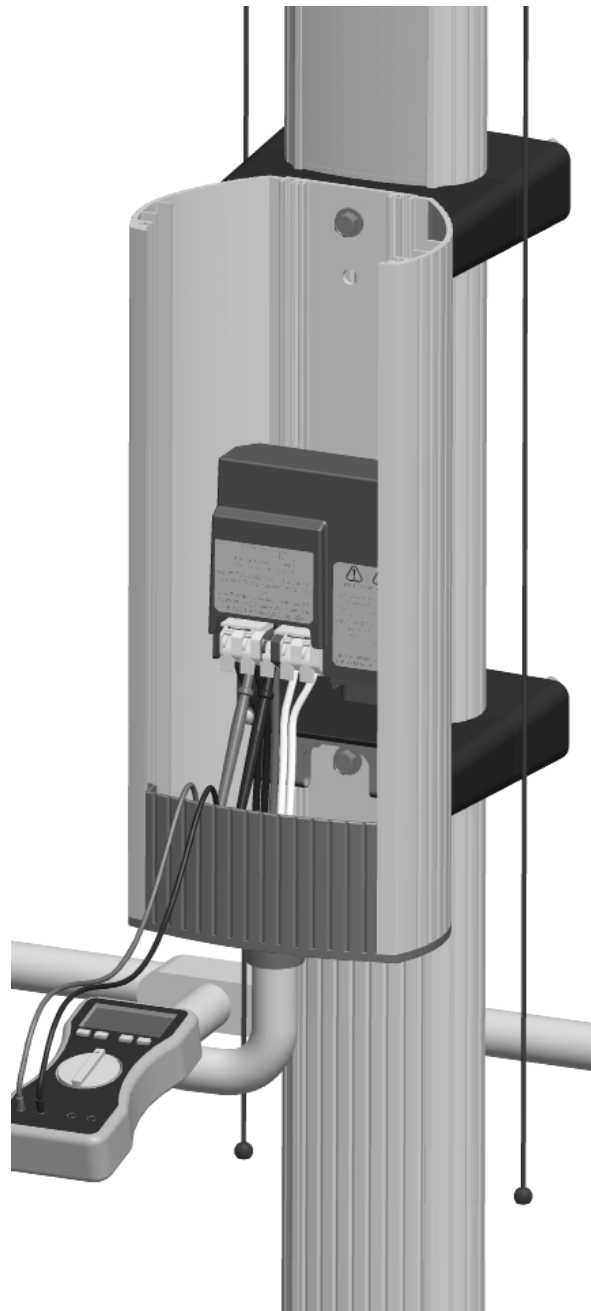
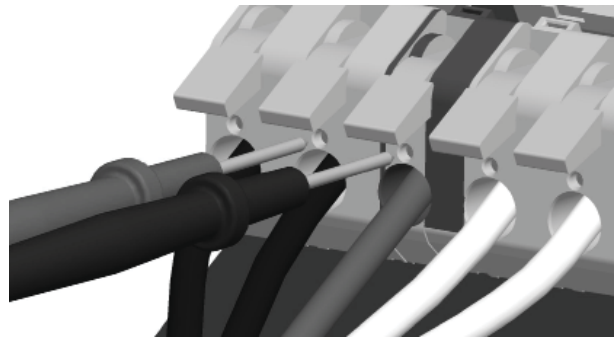
- Turn power ON.
- Using a solenoid type voltage tester, check that the voltages at the charging station's terminal block are as follows:

Measure Between	Volts
L1 and L2	208/240
GND and L1	120
GND and L2	120

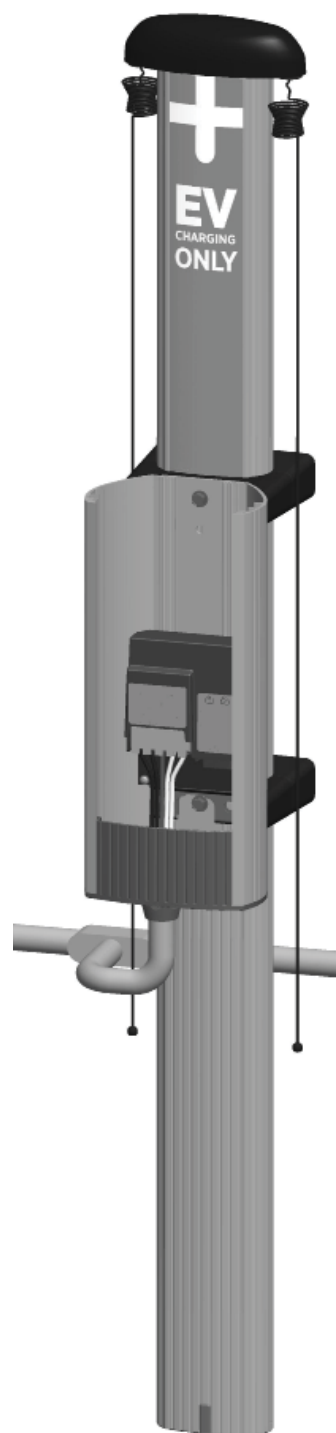
If the voltages are not as expected, ensure that the wiring has been properly connected as describing on the previous page. For detailed wiring diagrams and grounding requirements, see pages 1-4 to 1-6.

Before continuing, resolve any wiring issues and ensure that voltages are as expected.

- Turn power OFF.



You have now finished installing the wall mount and are ready to install the head assembly and top cap. See Chapter 4.



Installing the Head and Top Cap

4

Before You Start

Before installing the head and top cap, you must complete the installation of the main body and its cable management system as described in a previous chapter. You need the following:

- Wire cutter
- #2 Phillips screwdriver

Overview of Steps

Installing the head and top cap involves a few simple step, summarized below and detailed in the remainder of this chapter:

1. Check Boxes for Correct Contents (page 4-2)
2. Prepare Head Assembly for Mounting (page 4-4)
3. Slide Head Assembly into Body (page 4-6)
4. Connect Head Assembly (page 4-7)
5. Verify the Station Operates Correctly (page 4-10)
6. Install Cable Clamps (page 4-10)
7. Secure Head Assembly (page 4-11)

When you have completed these steps, you will be ready to prepare the station for activation on ChargePoint, as described in Chapter 5.

Step 1: Check Boxes for Correct Contents

Top cap

The station's top cap ships in a box containing:

- Top cap (1)
- Phillips screws (2)
- CT4000 Installation Guide (this document)

As illustrated below, the shape of the top cap depends on whether you are installing a bollard or a wall mount. The bollard mount's top cap is more rounded, whereas the wall mount's back is flatter. If installing both models, pay particular attention to the top cap's shape.



Side view
(rounded back)



Side view
(flat back)



Bollard



Wall Mount

Step 1 cont'd: Check Boxes for Correct Contents

Head assembly

The station's head assembly ships in a box containing:

- Head assembly
- Rubber plugs (4) - two of these are spares.
- T25 Allen wrench (attached with a security tag on the side of the head assembly)
- Spare activation label (a duplicate label is attached to the head assembly)



IMPORTANT: Keep the spare activation label for future reference. It contains critical information that is needed to document the radio groups when preparing the station for activation on ChargePoint (see page 5-5).

For gateway stations, a Network Enablement Kit is also included:

- SIM card
- Installation instructions

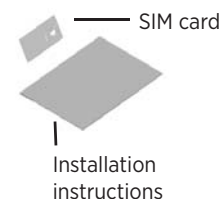


An activation label is attached to the head assembly. This duplicate label is provided to simplify the step of documenting the radio groups, as described in Chapter 5. It includes important information needed to activate the station on ChargePoint.



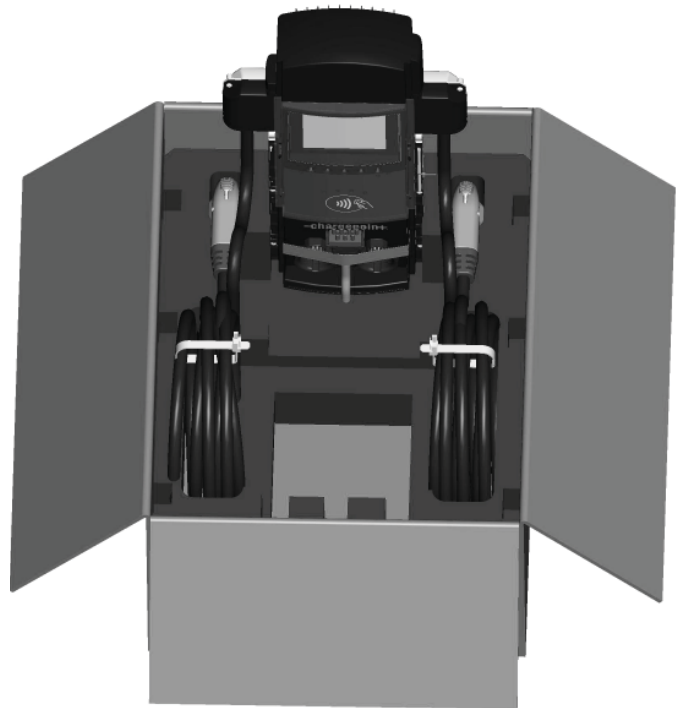
GATEWAY STATIONS ONLY:

The shipping box also includes an envelope containing the Network Enablement Kit.



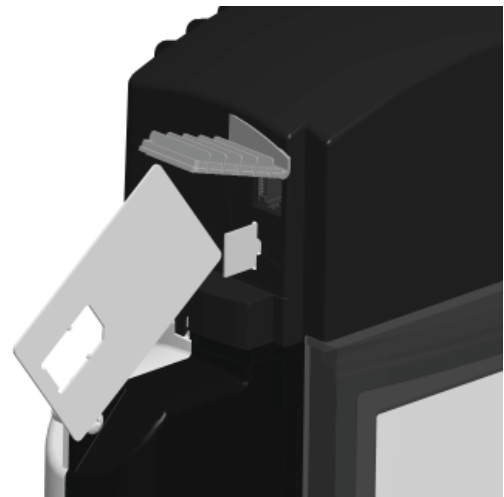
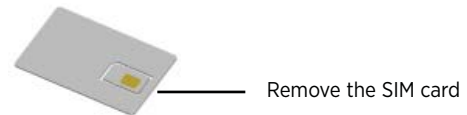
Step 2: Prepare Head Assembly for Mounting

- To prepare the head assembly for mounting, open the box and stand the head upright on its foam packaging, as shown.



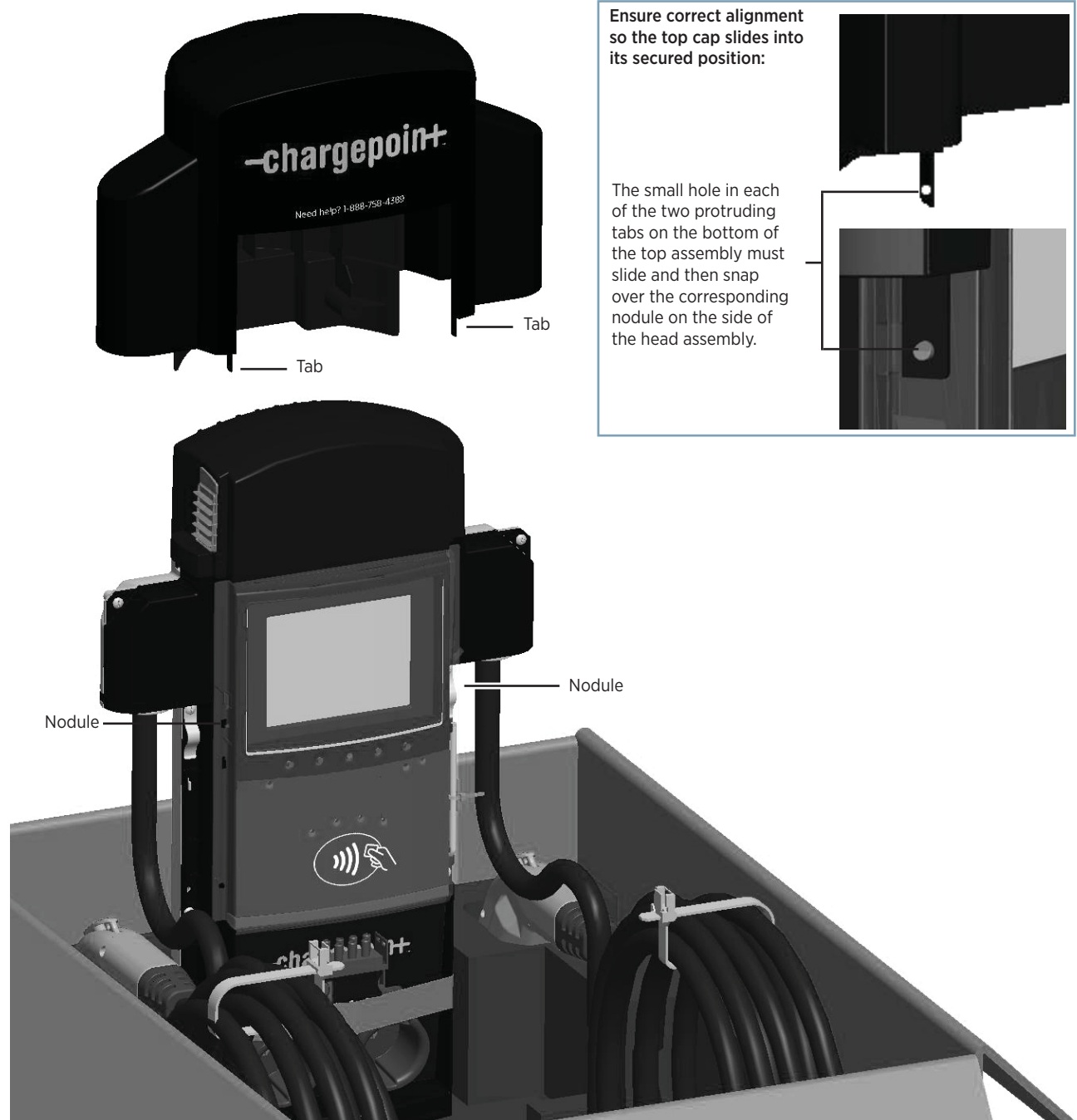
- If you are installing a gateway station, install the Network Enablement Kit:
 - a) Remove the SIM card from its carrier by pushing it firmly.
 - a) Lift the rubber flap located on the right hand side of the head assembly, as shown.
 - b) Insert the notched edge of the SIM card into the slot, with the notch facing upward. Slide it into the slot and push it FULLY into the slot until it “clicks” into place. Refer to the orientation instructions printed on the side of the head assembly.

TIP! To push the SIM card into the slot, use a corner of the SIM card’s carrier, as shown.




Step 2 cont'd: Prepare Head Assembly for Mounting

- Install the top cap
 - a) Place the top cap over the head assembly as shown, ensuring correct alignment.
 - b) Using a Phillips screwdriver, secure the top cap to the head assembly by inserting the two supplied screws into the back of the top cap and tightening to 20 in-lbs.



Step 3: Slide Head Assembly Into Body

Slide the head assembly into the main body until it is stopped by the head assembly's security tag.

 **IMPORTANT:** Do not insert the charging connectors into the holsters until after you've powered up the station. Doing so causes the holsters to permanently lock.

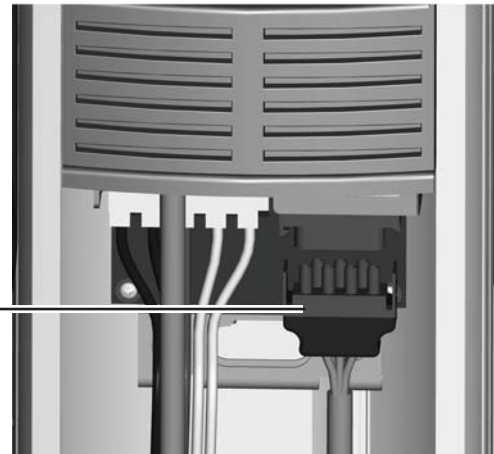


Step 4: Connect Head Assembly

Pull to remove the yellow strap from the blue connector.

Connect the blue connector to the terminal block, ensuring it “clicks” into place.

The blue connector “clicks” into place on the terminal block



Push the cover down over the terminal block.

Push the cover down over the terminal block



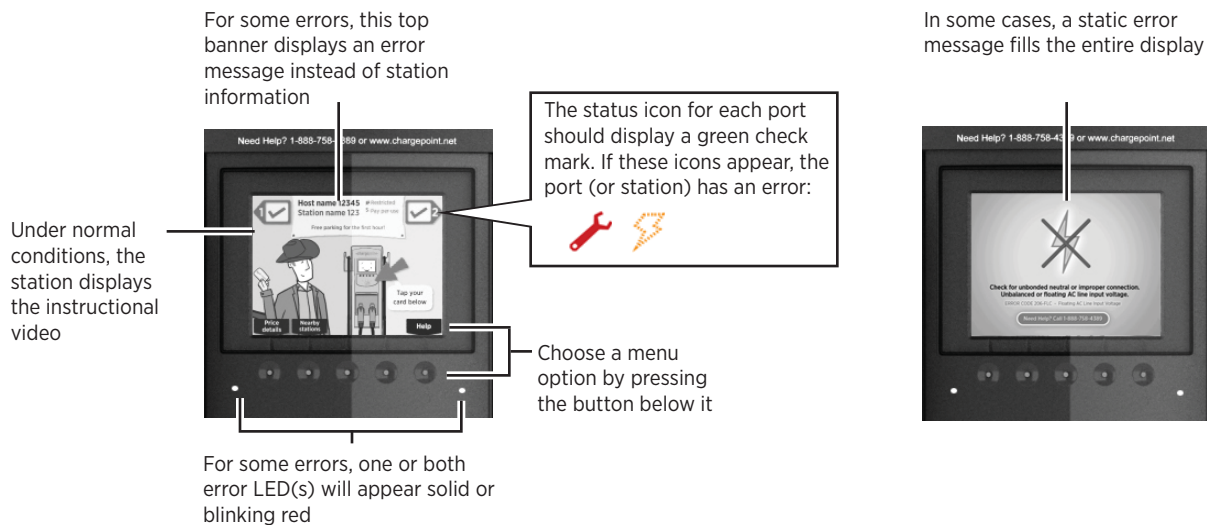
Step 5: Verify the Station Operates Correctly

Before securing the head assembly, follow these steps to verify that the station is fully operational.

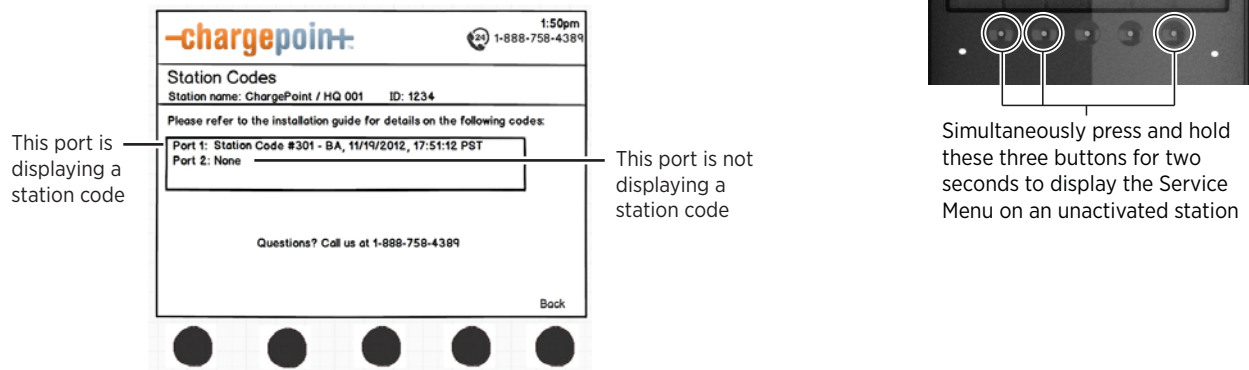
! IMPORTANT: if the station is not operating as described below, see “Chapter 6, Troubleshooting” to resolve the error before continuing.

- When the station is powered on, you should see:
 - The instructional video, and no error messages.
 - The status icon for each port displaying a green check mark.
 - neither of the two error LEDs light up (for some errors, these LEDs are solid or blinking red).

NOTE: If the station does not power up, check that the head assembly's rectangular connector is properly seated onto the terminal block.



- Even if the station's display and LEDs show no indication of an error, always display station codes to confirm that no errors exist. To display station codes:
 - Activate the Service Menu by simultaneously pressing and holding the two leftmost buttons and the rightmost button for two seconds.
 - Press the station button immediately below the “HELP” menu option.
 - Press the station button immediately below the “DOWN” menu option to highlight “Station Codes”.
 - Press SELECT.



If you see a station code, you must resolve or report the error before leaving the installation site. Station codes are described in “Chapter 6, Troubleshooting.”

Step 5 cont'd: Verify Station Operates Correctly

3. Use the ChargePoint card attached to the front cover of this Installation Guide to authorize a charging session. Make sure that both plug holsters unlock and that the station displays instructions on how to plug into the vehicle.

NOTE: The ChargePoint card supplied on the front cover can authorize up to ten charging sessions.

If you have performed the above steps, and the station operates as described and no errors exist, continue with the installation. If any of the above conditions are not met, resolve the error before continuing by referring to Chapter 6, Troubleshooting.

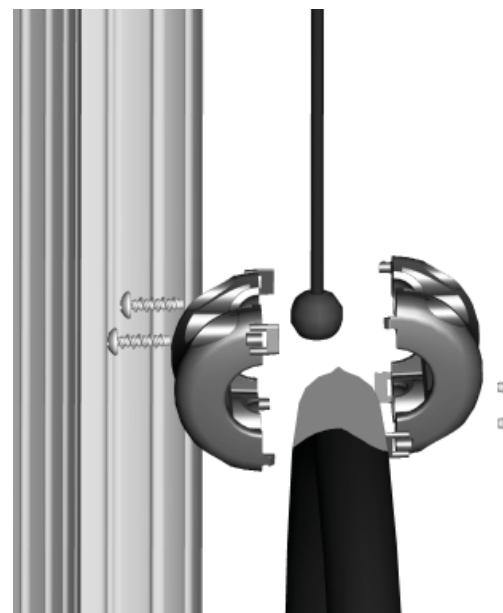
Step 6: Install Cable Clamps

! IMPORTANT: Do not unwrap the ropes until they are securely attached to the charging cable.

To install the cable clamps:

- Locate the bead at the end of the retractor rope.
- Uncoil the charging cable by removing the plastic wrap, then gently extending it all the way out, away from the station. Rotate the plug as necessary to remove any twists or kinks. Locate the tape that marks the position where the clamp attaches to the cable.
- Hold the charging cable with the marked tape positioned under the retractor top, as shown. Ensure the charging cable does not touch the ground when fully retracted.
- Insert the bead inside the clamp, then snap the opposite side of the clamp into place.
- Secure the two sides of the clamp together by inserting the four screws and tightening them securely using a Phillips screwdriver.
- Repeat the above steps for the other charging cable (if applicable). If installing a single port station, allow the left (unused) rope fully retract into the top cap.
- Pull down on the rope and remove the rope from its wrapper. When the rope is unwrapped, it retracts into the top cap.

! IMPORTANT: Check that the charging cable extends and retracts fully and smoothly. If it doesn't, see page 6-5.



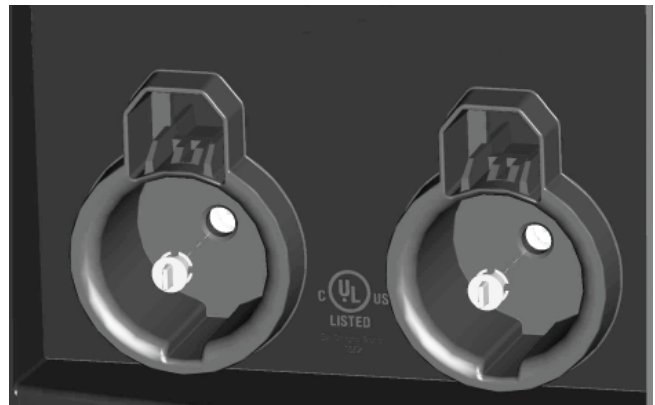
Step 7: Secure Head Assembly

To secure the head assembly:

- Remove the T-25 L-wrench by rotating it to the right until the security tag breaks. Lift the head assembly slightly and remove the L-wrench.
- Lower the head assembly. Ensure the head assembly is fully seated and that no gap exists between the bottom of the head assembly and the main body. The head assembly fits tightly and may require extra downward force to ensure it is fully seated.
- Using the T25 L-wrench, tighten the two security set screws, located inside the holsters, to approximately 25 to 30 in-lbs.



- Cover the screws using the two rubber plugs.
- Insert the charging plugs into their corresponding holsters.



You have now finished the physical installation of the CT4000 charging station and are ready to prepare the station for activation on ChargePoint. See Chapter 5.

Preparing the Station for Activation on ChargePoint

5

Before You Start

Before leaving the installation site, you must prepare the station for activation. You need the following:

- a laptop or tablet computer
- installer user name and password for www.chargepoint.com

Overview of Steps

Preparing the station for activation on ChargePoint involves a few simple steps, summarized below and detailed in the remainder of this chapter:

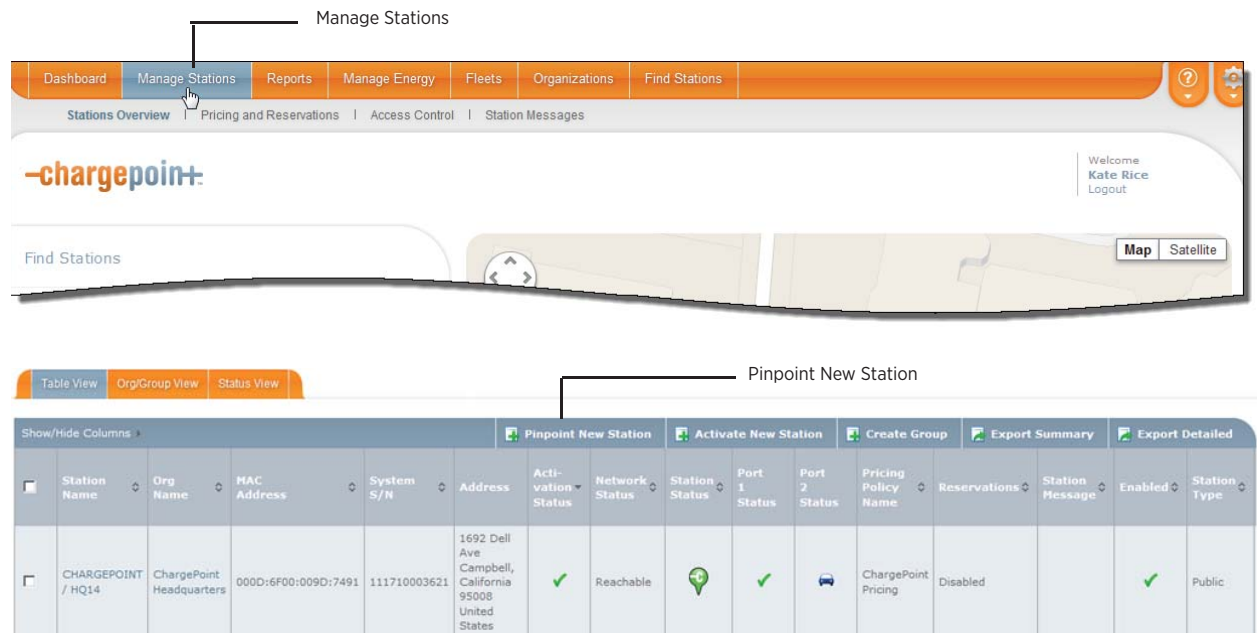
1. Pinpoint the Station (page 5-2)
2. Document the Radio Groups (page 5-5)
3. Complete the Post-installation Checklist (page 5-6)

When you have completed these steps and provided the necessary information to the person responsible for activating the station on ChargePoint, the installation of the CT4000 charging station is complete.

Step 1: Pinpoint the Station

Follow these steps to pinpoint the station on ChargePoint.

- 1. Log in to ChargePoint; then, on the **Manage Stations** tab, click **Pinpoint New Station**.



- 2. Enter the station's MAC Address and activation password, then click Verify.

NOTE: The station's MAC Address and activation password is printed on a label that has been taped to the front of the head assembly. A label is also affixed to the head assembly itself, but once the head assembly has been installed, you can no longer see it.



Activate Station

General

To get started, enter the MAC address and activation password from the label on your charging station.

* MAC Address

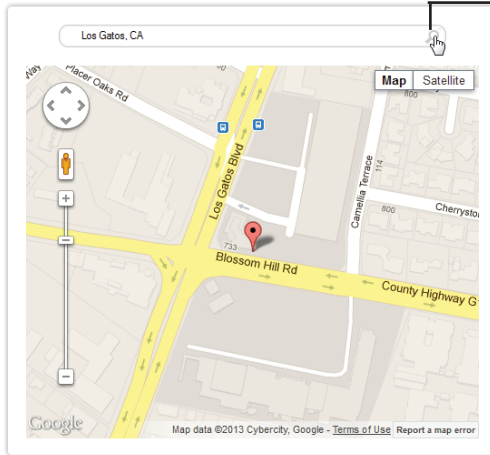
* Activation Password

Step 1 cont'd: Pinpoint the Station

3. Enter the station's physical location.

- a) In the search field above the map, enter the station's physical address, then click the magnifying glass. You can enter a full or partial address—you will pinpoint the exact location of the charging station in the next step.

Search for your station location below



Enter the address, then click the magnifying glass

Station Address

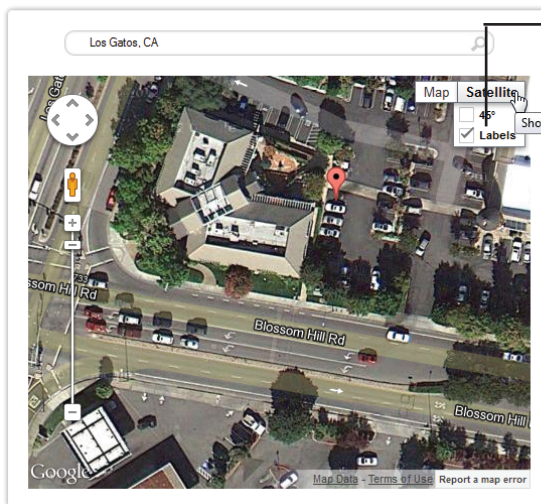
Address 16006 Los Gatos Blvd
Los Gatos, CA, 95032
US

Latitude 37.2356923
Longitude -121.96233799999999

Manually edit the address

- b) Change to **Satellite View** and drag the pinpoint to the parking spot where the station is located.

Search for your station location below



Click here for Satellite View

Station Address

Address 16006 Los Gatos Blvd
Los Gatos, CA, 95032
US

Latitude 37.23586527117878
Longitude -121.96218779629515

Manually edit the address

* The address indicated by the marker is different from the address you entered. If the new address is correct, click 'Update'. If neither address is correct, you must manually update the address.

16006 Los Gatos Blvd
Los Gatos , CA, 95032
US

Update Address

NOTE: A station's address and physical location may vary slightly. The goal is to make it easy to identify the station's location on a Google™ map. Therefore, be as accurate as possible when pinpointing a station's location. This is especially important when you install multiple stations at the same street address.

- c) Click **Update Address** to accept the address shown to the right of the satellite image, or click **Manually edit the address** to enter the correct address—one that will make sense to drivers.
- d) In the **Helpful Information for Drivers** field, enter any information that will make it easier for drivers to find the station. For example, "Back parking lot", or perhaps "Second floor of parking garage, near mall entrance."
4. Click **Save and Activate Later**.

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Step 2: Document the Radio Groups

For each radio group, attach spare activation labels below to document how stations are organized. After completing the next step on the reverse side, tear out this page and give it to the person responsible for activating the station. If installing multiple radio groups, use one page for each radio group (this page is included in all CT4000 Installation Guides).

Customer Name	
Site Address	

Gateway	<p>GW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>
---------	--

NOTE:
Gateways begin with "GW-"
Non-gateways begin with "NGW-"

<p>GW-RFID-DUAL-18 Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Activation Password: 00000</p>

Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>	Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>
Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>	Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>
Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>	Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>
Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>	Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>
Non-gateway	<p>NGW-CORP-SNG Serial No: YYWWSSNNNNNN MAC: 0000-0000-0000-0000 Provisioning Password: 00000</p>	<p>NOTE: A radio group consists of one gateway station and up to nine non-gateways.</p>	

After completing both sides, cut or tear along dotted line and give it to the person responsible for activating the station.



Step 3: Complete the Post-Installation Checklist

Before leaving the installation site, complete this checklist for each radio group. Then tear out this page and give it to the person responsible for activating the station. If installing multiple radio groups, use one page for each radio group (this page is included in all CT4000 Installation Guides).

<input checked="" type="checkbox"/>	Check each box below to confirm that the task has been completed for all stations within the radio group.
<input type="checkbox"/>	All mounting hardware is tightly secured and all stations are level and rock solid.
<input type="checkbox"/>	The two security screws inside the holster plugs on all head assemblies are tightened and the rubber plugs are in place.
<input type="checkbox"/>	Cable retractors: <ul style="list-style-type: none"> • Cable clamp halves are screwed together with no gaps. • All charging cables operate smoothly through full extension and retraction.
<input type="checkbox"/>	Voltages at all power plates have been verified with a solenoid type voltmeter (such as a Wiggy): <ul style="list-style-type: none"> • Line-to-Line measures 208/240VAC. • Line-to-Earth measures 120VAC.
<input type="checkbox"/>	If Power Share Jumpers are installed: <ul style="list-style-type: none"> • All jumpers are fully inserted. Look for 1/8" (3 mm) depth. • Power Share mode has been configured, using the stations' Service Menu, for all power-shared stations and the station's display indicates that power sharing is in effect. • The supplied Electrical Rating label has been applied above the terminal block.
<input type="checkbox"/>	Check the station's communications signal(s) (Help > Network) and ensure that the: <ul style="list-style-type: none"> • LAN signal strength shows at least 2 bars on all stations. • WAN signal strength shows at least 2 bars (on the gateway station).
<input type="checkbox"/>	The Service Menu shows no station codes for either port (Help > Station Codes) on all stations.
<input type="checkbox"/>	Start a charging session on all stations using a ChargePoint card (provided on the front cover of this Installation Guide). Ensure the station displays no error codes or warning lights and that both holsters unlock and lock.
<input type="checkbox"/>	Pinpointing (locating on the ChargePoint map) has been completed for all stations.
<input type="checkbox"/>	The radio group has been documented for activation by attaching the spare activation labels to the previous page.

After completing both sides, cut or tear along dotted line and give it to the person responsible for activating the station.

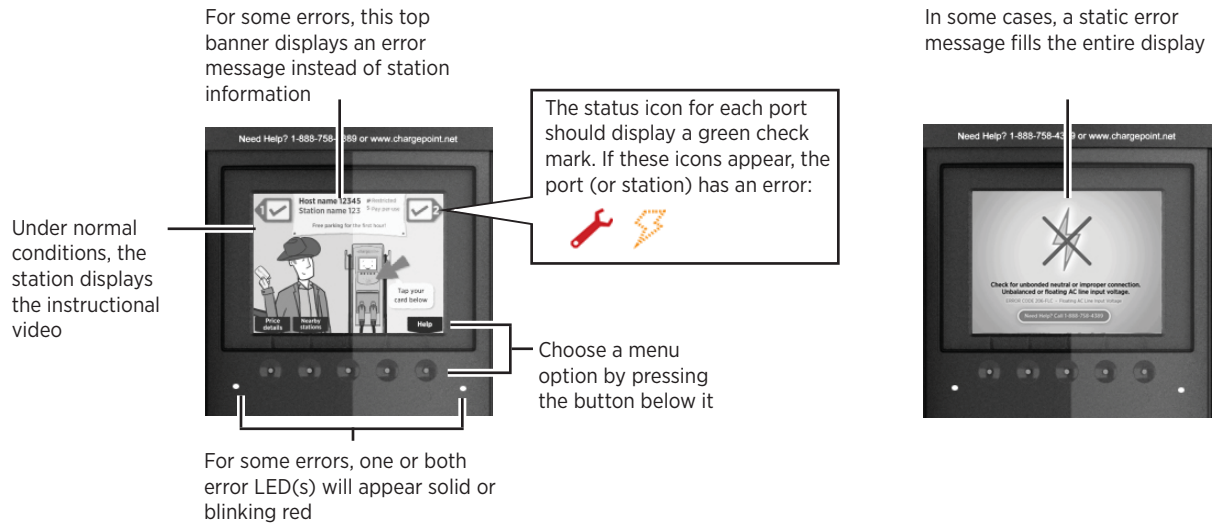


Troubleshooting

6

Check the Station's Display

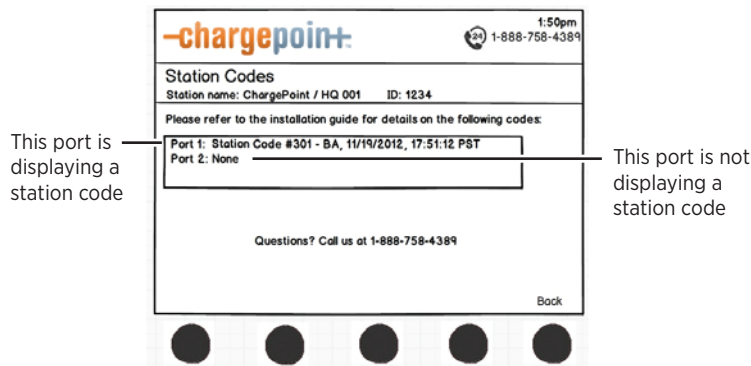
The CT4000's display, and its associated error LEDs, alert you of several types of errors.



Display Station Codes

Even if the station's display and LEDs show no indication of an error, always display the station codes to confirm that no errors exist. To display station codes:





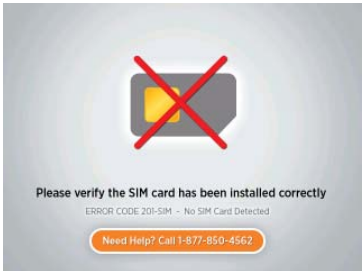




1. Display the station's Service Menu:
 - if the station is not activated on ChargePoint, simultaneously press and hold the two leftmost buttons and the rightmost button for two seconds
 - if the station is activated on ChargePoint, scan your ChargePoint Service card
2. Press the station button immediately below the "HELP" menu option.
3. Press the station button immediately below the "DOWN" menu option to highlight "Station Codes".
4. Press SELECT.



















Simultaneously press and hold these three buttons for two seconds to display the Service Menu on an unactivated station

If you see a station code, you must resolve or report the error before leaving the installation site. Station codes are described on the following pages.

Description of Station Codes

Code	Symptom	Possible cause(s)	Recommended Action(s)
In most cases, a driver can resolve the following station codes that begin with the digit "1":			
101- Over Current Detection	 <i>n</i> = the number of the applicable port	During charging, the vehicle attempted to draw more power than allowed. The station stops delivering power to the vehicle.	Can indicate faulty wiring in the vehicle. End the session by inserting the station's plug back into its holster, then restart the session. If the error persists, call ChargePoint Customer Support at 1-877-850-4562.
102- Ventilation Requested	 <i>n</i> = the number of the applicable port	Vehicle requires ventilated charging which is not supported by the station. The station stops delivering power to the vehicle.	Driver will be unable to use the station to charge their type of vehicle. Call the vehicle manufacturer.
103- Soft Ground Fault	 <i>n</i> = the number of the applicable port	During charging, the station detected a ground fault. The station stops delivering power to the vehicle, but continues to retry every 30 seconds.	End the session by inserting the station's plug back into its holster, then restart the session. If the error persists, call ChargePoint Customer Support at 1-877-850-4562.
104- Immediate Ground Fault	 <i>n</i> = the number of the applicable port	On initial plug-in, the station detected a ground fault. The station stops delivering power to the vehicle.	End the charging session by inserting the station's plug back into its holster, then restart the session. If the error persists, call ChargePoint Customer Support at 1-877-850-4562.
In most cases, an electrician can resolve the following station codes that begin with the digit "2":			
201-SIM		SIM Not Detected - The SIM is either not installed or is incorrectly installed and the station can not communicate with the ChargePoint network.	Disconnect power and install (or re-install) the SIM card as described on page 5-4. If the error persists, call ChargePoint Customer Support at 1-877-850-4562.
202-EF	 	Earth Fault - The station has detected a poor ground connection and the station is not operational.	Disconnect power and check that the station is properly grounded as described on page 1-7. After ensuring the station is properly grounded, reconnect power. If the error persists, try unplugging the head assembly and plugging it back in. If the error continues to persist, call ChargePoint Customer Support at 1-877-850-4562.
203-SNP	The banner between the port icons displays "STATION NOT ACTIVATED ON CHARGEPOINT - GRACE SESSIONS REMAINING (N)." When all grace sessions have been used:  	Station not activated - The station can be used to charge for the specified number of remaining grace sessions. When all grace sessions have been used, the station is not operational.	Arrange for the station to be activated on ChargePoint by completing the steps in Chapter 5.
204-NGNP	Before activation: The banner between the port icons displays "NO GATEWAY WITHIN RANGE." After activation: All you will see is the code listed on Help > Station Codes.	Non-Gateway Not Paired - The station is set up to communicate with a gateway station that is either not within range, or is not powered on.	Verify that the gateway station is powered on and located within 150 feet line of sight (no obstructions). If the error persists after these requirements are met, call ChargePoint Customer Support at 1-877-850-4562.

Code	Symptom	Possible cause(s)	Recommended Action(s)
205-UNS	<p>Before activation: The banner between the port icons displays "NETWORK SIGNAL NOT DETECTED."</p> <p>After activation: All you will see is the code listed on Help > Station Codes.</p>	<p>Unknown Network Signal - The gateway station is unable to establish a network connection on AT&T/Verizon (US) or Rogers (Canada).</p>	<p>Ensure the station is receiving an adequate signal strength from the cellular network. To do so, display the Service menu*, then:</p> <ul style="list-style-type: none"> Check the network signal for each type of modem by choosing: Basic mode > Display last measured RSSI. The strength of the signal should be A, B, or C. If the network signal is Grade D, or if a better network signal is available on the other type of modem, change modems by choosing: Basic mode > Change modem technology (CDMA or GSM). <p>If the signal strength is either weak (D) or not available for both CDMA and GSM, arrange for cellular repeaters to be installed near the installation site.</p> <p>If the error persists when the station shows a strong network signal, call ChargePoint Customer Support at 1-877-850-4562.</p> <p>*To display the station's Service Menu, scan your ChargePoint Service card (if the station is activated) or, if the station is not activated, press the three station buttons as described on page B-3.</p>
206-FLC	<p>Before activation:</p>  <p>After activation: You will see the code listed on Help > Station Codes and the port status icons will show:</p>  <p><i>n</i> = the number of the applicable port or</p>	<p>Floating Line Connection - The voltage of an AC input line has fallen below 80 volts AC relative to ground. Even if the line to line voltage measures nominally 208 or 240 volts, the voltage of each line must be greater than 80 volts when measured to ground.</p> <p>The two most common causes of a Power Line Fault are:</p> <ul style="list-style-type: none"> A poor connection in the wiring supplying power and the ground connection to the station. There could be a poor connection between the buss bar and circuit breaker, the breaker to the branch circuit feeding the station, or at any splice along the branch circuit. The station is connected to an incompatible improperly grounded power source. All power and ground connections must be clean and tight and carry the full rated current of the station. Do not connect the station to an ungrounded (floating neutral) system, a corner grounded Delta system, or the high (or "stinger" leg) of a center grounded Delta system. 	<p>Correct any faulty connections.</p> <p>Verify that the station is connected to a system with its neutral properly grounded according to NEC Article 250.</p> <p>Verify the station is connected to one of the system types described in Chapter 1.</p> <p>If the error persists, call ChargePoint Customer Support at 1-877-850-4562.</p>

Code	Symptom	Possible cause(s)	Recommended Action(s)
ChargePoint Support may need to resolve the following station codes that begin with the digit “3”:			
301-BA	 	Breakaway Fault - The cable has been removed from the station or is damaged. The station is not operational.	Call ChargePoint Customer Support at 1-877-850-4562 to arrange to have the station replaced.
302-GST	 <p>n = the number of the applicable port</p> <p>or</p>  	GFCI Self Test Failed - The station detected a ground fault during power up and is not operational.	End the session by inserting the station's plug back into its holster, then restart the session. If the error persists, call ChargePoint Customer Support at 1-877-850-4562.
303-RSC	 <p>n = the number of the applicable port</p> <p>or</p>  	Relay Stuck Closed - When attempting to end a charging session, the relay stays closed. Although the driver can return the station's plug to its holster, the station doesn't end the session. Therefore, a new session can not be started.	Call ChargePoint Customer Support at 1-877-850-4562 to arrange to have the station replaced or repaired.
305-LCO	 	Pilot Unreachable - The station is out of service.	Disconnect and reconnect power. If the error persists, call ChargePoint Customer Support at 1-877-850-4562 to arrange to have the station replaced or repaired.
306-BF	 	Boot Fault - The station is out of service.	Disconnect and reconnect power. If the error persists, call ChargePoint Customer Support at 1-877-850-4562 to arrange to have the station replaced or repaired.
307-HE	 	Hardware Error - The station is out of service.	Disconnect and reconnect power. If the error persists, call ChargePoint Customer Support at 1-877-850-4562 to arrange to have the station replaced or repaired.

Charging Cable Doesn't Move Freely

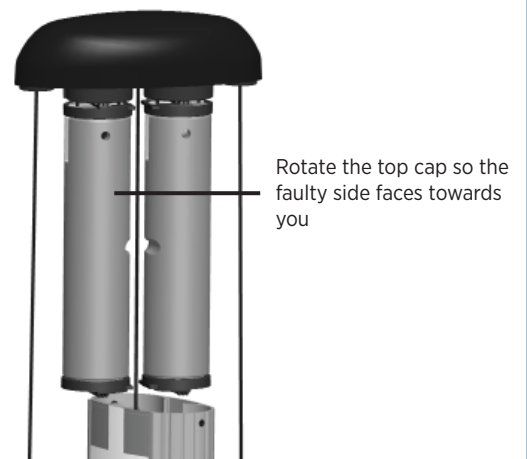
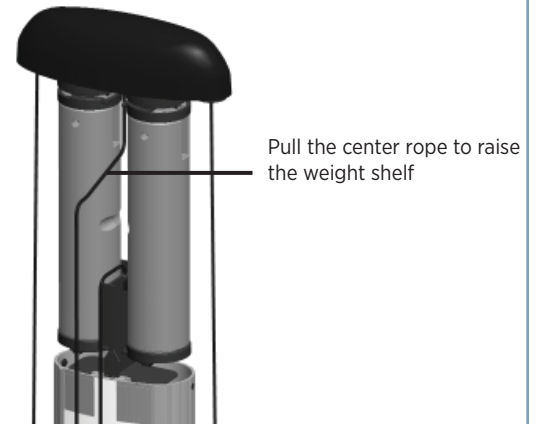
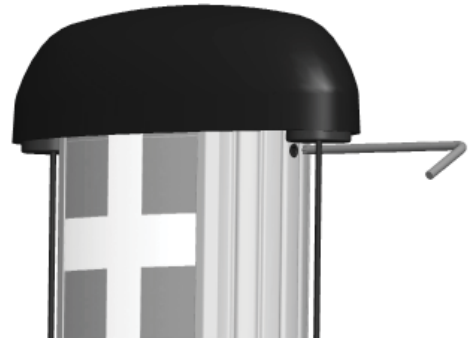
If the charging cable does not extend or retract fully and smoothly, it is likely that its rope has come off the pulley and you must re-position it.

You will need:

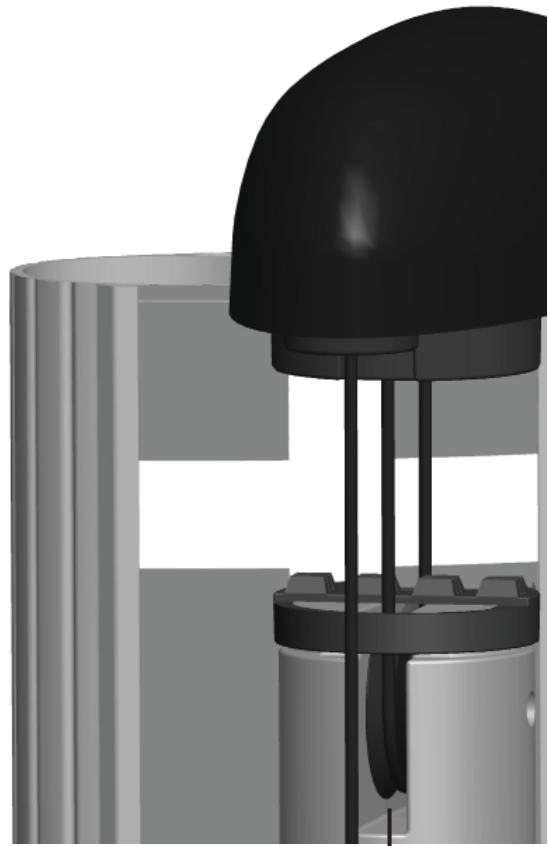
T25 L-wrench

Follow these steps:

1. Using the T25 L-wrench, loosen the set screws on each side of the retractor below the top cap.
2. Each rope is attached to a weight that sits on a shelf. Pull the weight shelf up by pulling the rope located in the middle of the top cap.
3. Rotate the top cap so the weight controlling the rope that doesn't move freely is facing towards you.



4. Inspect the rope to ensure it is properly aligned onto the pulley.
5. Carefully lower the weight back into the retractor.
6. Rotate the top cap back into position and re-tighten the set screws to about 10 in-lbs.



Ensure the rope is properly aligned onto the pulley

Preparing the Installation Site for a Bollard Mount

A

Before You Start

The ChargePoint® Charging Station's bollard mount can be installed either:

- into the ground
- onto an existing concrete surface (on an intermediate floor only)

This appendix provides basic guidelines for preparing the installation site in both scenarios.

⚠ IMPORTANT: Always check local codes to ensure compliance. You may need to adjust the guidelines provided in this appendix to comply with codes that apply at your installation location.

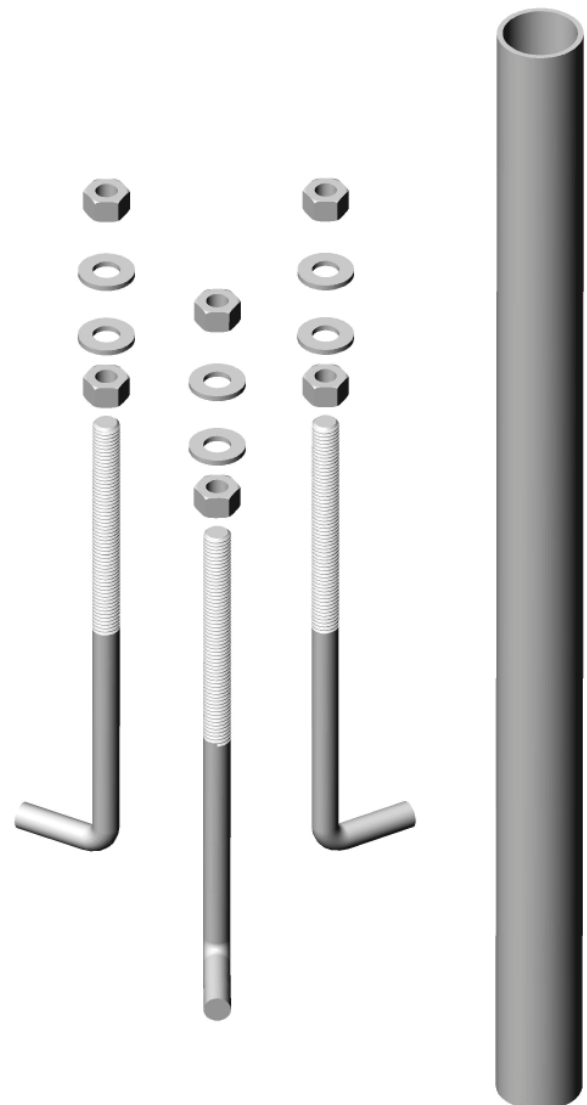
Installing Into the Ground

To install the CT4000's bollard mount into the ground, you will need:

- Concrete mix
- Three 5/8" galvanized J-Bolts at least 11 1/2" (29.2 cm) long, with a minimum yield of proof strength of 80,000 psi (example bolt specification is F1554 Grade 105, red painted end) with nuts and washers, as shown. Ensure that J-Bolts, nuts, and washers are in compliance with all applicable codes.
- Conduit at least 1 1/2" (38 mm) diameter. Ensure that conduit is in compliance with all applicable codes.
- Base plate mounting template. This template is stapled into the center fold of this document. A PDF version is available at:

www.chargepoint.com/support-installation-guides.php

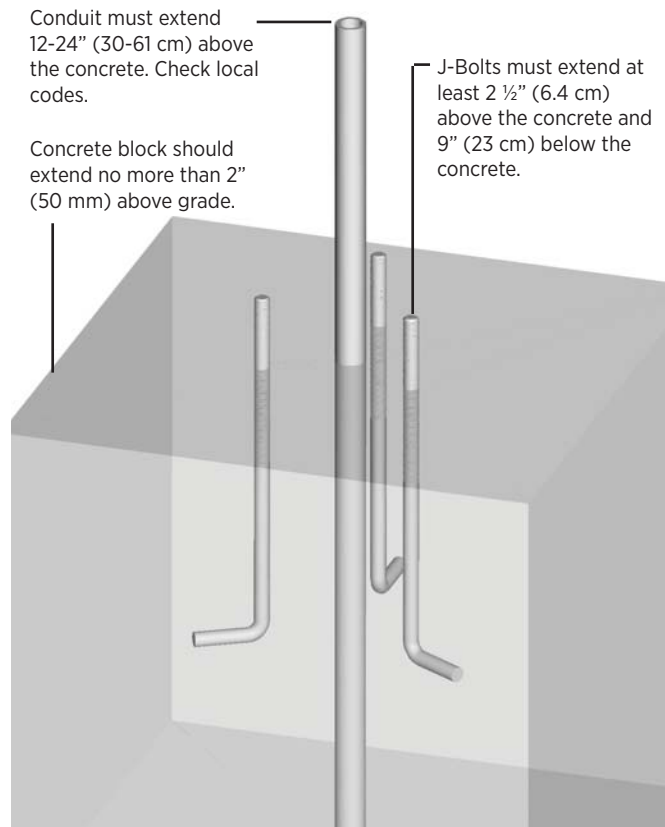
Ensure the PDF version is accurate by printing it at 100% scale on 11" x 17" paper, and then verifying at least one dimension.



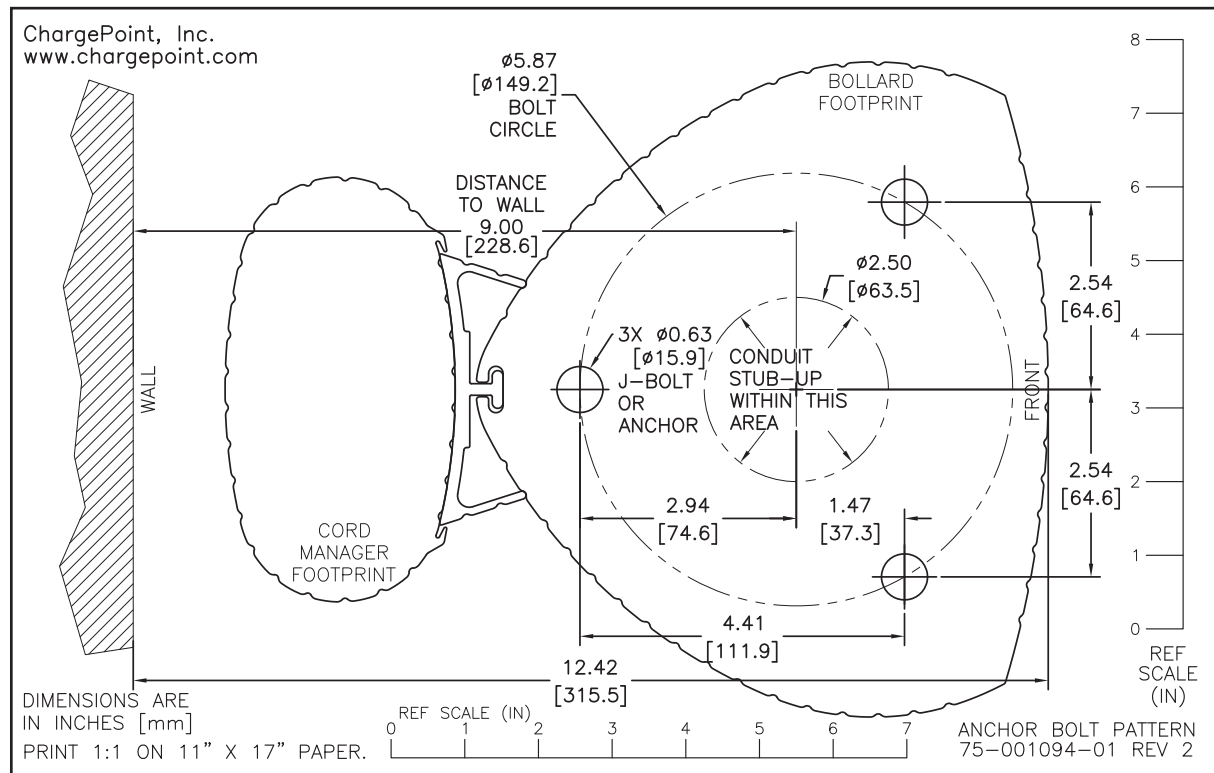
Install J-Bolts and conduit into concrete as illustrated. To ensure correct alignment, use the template stapled into the center fold of this document (illustrated below).

! IMPORTANT:

- The concrete block must measure at least 24" (61 cm) on all sides. Check local codes to ensure compliance.
- The J-Bolts threads must extend at least 2 ½" (6.4 cm) above the concrete and 9" (23 cm) below the concrete.
- The conduit must extend 12" to 24" (30 to 61 cm) above the concrete. Check local codes to ensure compliance.
- You can also print a PDF version of the mounting template, available at www.chargepoint.com/support-installation-guides.php. Before using a self-printed template, print at full scale on 11" x 17" paper and verify at least one dimension.



Example of template (not to scale):



Installing Into Existing Concrete



IMPORTANT! Follow instructions exactly as described to ensure rated performance. Ensure compliance with all applicable local and national electrical and building codes.

You will need:

- Three bolts at least 5/8" in diameter (length will vary depending on thickness of floor but must extend at least 2 1/2" above the concrete). Each bolt must be capable of supporting a minimum of 8,000 pounds (such as a 5/8" F1554 Grade 55).
- 1 1/16" hole saw, or a 3/4" trade size Greenlee punch
- Masonry drill and drill bit
- Conduit sealing ring (or an alternative sealing method)
- Base plate mounting template (provided in the shipping box with the bollard)

Install the anchors



CAUTION: Use X-ray imaging to avoid drilling into any rebar, conduit, or pipe that may exist in the concrete.

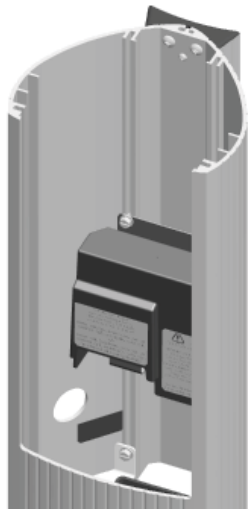
Using the template provided in the bollard's shipping box, drill the three anchor bolt holes at their correct locations.

TIP! Create a reusable plywood or plastic template using the bollard mount's base plate (with the pipe) or the paper template provided in the bollard's shipping box.

Align the anchors and bolt to the garage floor. The bolts must protrude at least 2 1/2" above the concrete.

Run conduit into bollard mount

To run wiring into the bollard, use the hole saw or punch to cut an opening approximately half way up the bollard. The opening should be located between 29" and 32" from the bottom of the bollard, immediately below the terminal block.



Seal the conduit, ensuring compliance with applicable electrical codes.



CAUTION: Protect the wiring that runs into the bollard to prevent them from contacting sharp edges.

Removing or Replacing the EV Charging Sign

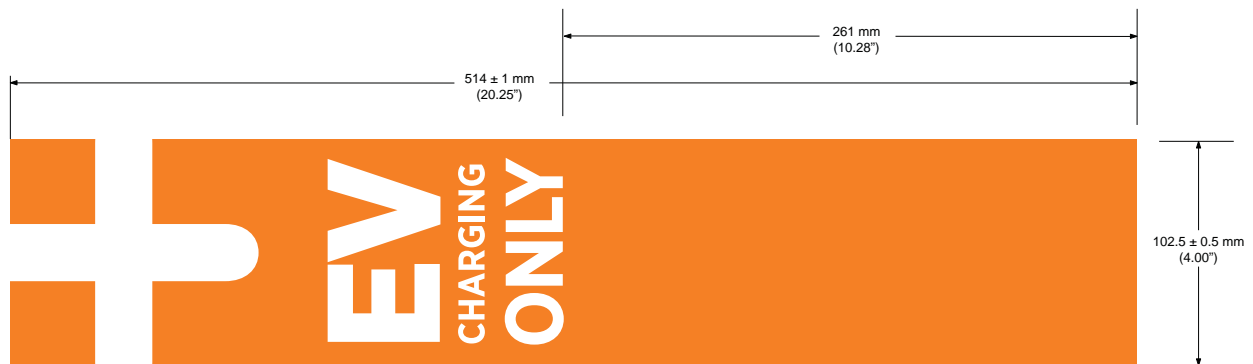
B

The method used to remove and/or replace the EV Charging Sign differs depending on whether the station has been installed. Both methods are described in this appendix.

To ensure a proper fit, a replacement sign must have the following characteristics, at a minimum:

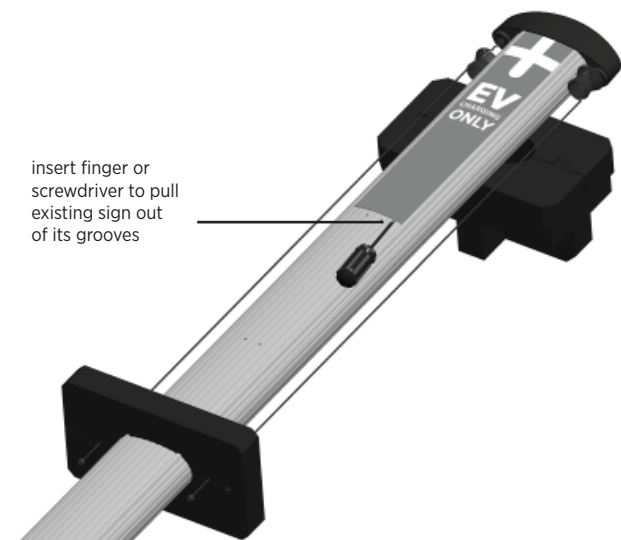
- Material - Vinyl with a maximum thickness of .03"
- Dimensions - Exactly 4.00" (102 mm) wide and up to 20.25" (514 mm) high

A detailed sign specification is available at www.chargepoint.com/support-installation-guides.php. Example of sign specification (not to scale):



During Station Installation

1. After removing the retractor from the shipping box, remove the existing sign before mounting it. Insert your finger or a screwdriver underneath the bottom edge of the sign to pull it out of the retractor's grooves.
2. To install a new sign, bend it slightly and insert it into the grooves.



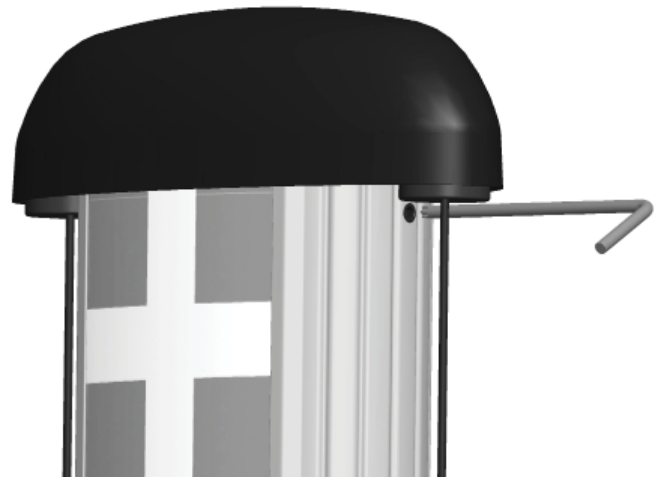
After Station Installation

To remove the sign after the station has been installed:

1. Use a T25 L-wrench to loosen the set screw on each side of the top cap, as shown.
2. Pull the top assembly up and move it towards the back of the retractor.
3. Slide the existing sign out of the grooves.

To install a new sign:

1. Slide the replacement sign into the grooves by bending it slightly. See the previous page for sign specifications.
2. Re-install the top assembly. Remember to tighten the set screws.



Bend the sign slightly to insert it into the grooves



CT4000 Power Sharing Instructions

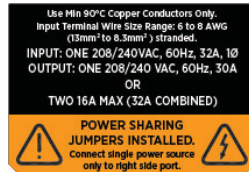
C

A CT402X provides 30A of charging to each port when connected to two 40A circuits, or it can be configured to allow both ports to share one 40A circuit. To allow both ports to be powered by a single 40A circuit, you must complete the steps provided this appendix. You will need the supplied power sharing kit (CT4020-PSHARE), located in the shipping box with the station's main body. The power sharing kit contains:

Jumpers (2)



Electrical Rating label



Before you start


Before installing the power sharing kit, complete the installation instructions for the main body (see Chapter 1 or 2), but do not connect the wiring.

Overview of steps

Installing the power sharing kit involves a few simple steps, summarized below and detailed in the remainder of this appendix:

1. Install the Jumpers (page C-2)
2. Connect the Wiring (page C-3)
3. Apply the Electrical Rating Label (page C-4)
4. Configure the Station for Power Sharing (page C-5)

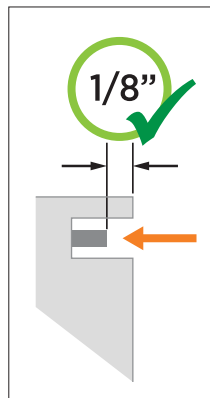
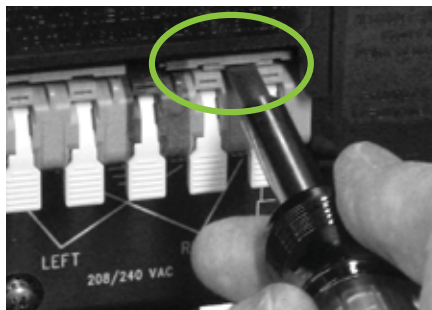
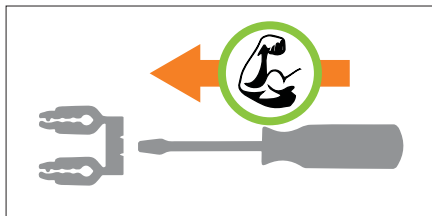
Step 1: Install the Jumpers


 **WARNING:** Disconnect power before you begin.

- Push the black tab on the terminal block to release the terminal block cover, then slide the cover up until it locks into the raised position:



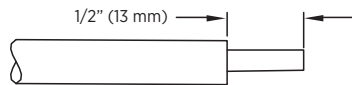
- Insert the jumpers into the slots located near the upper edge of the terminal block. Using a large flat blade screwdriver, push firmly on each jumper until you feel it lock into place.



 **IMPORTANT:** Ensure both jumpers are fully seated. The jumpers should recede 1/8" (3 mm) below the outer surface of the terminal block, as shown. If they are flush, they are not fully inserted.

Step 2: Connect the Wiring

- Strip wires ½" (13 mm).



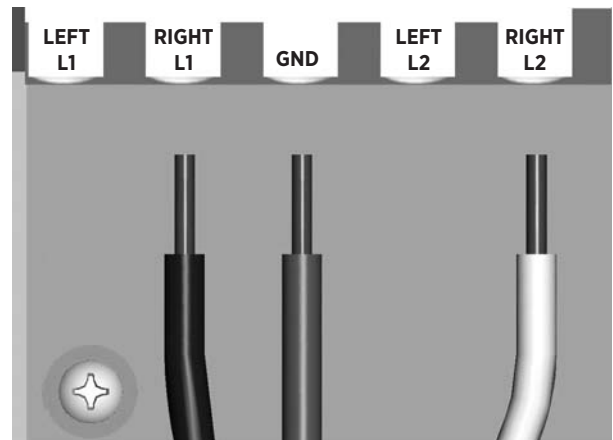
- Lift the white lever on the terminal block that corresponds with the ground connection (center), insert the ground wire, then push the lever down until it clicks into its fully closed position.
- Lift the white levers on the terminal block that corresponds with the RIGHT port's L1 and L2 connections. Insert the L1 and L2 wires fully into the terminal block, then push the levers down until they click into their fully closed positions.

NOTE: The connections for the left port are not used. Power for the left port is carried through the jumpers.



WARNINGS:

- Use copper conductors only.
- Do NOT provide GFCI protection at panel. The CT4000 has built-in GFCI protection.
- In areas with frequent thunder storms, add surge protection at the service panel for all circuits.
- Use new circuit breakers only. Used breakers can damage equipment and introduce the potential for an electrical fire.**
- Ensure all power and ground connections, especially those at the breaker and buss bar, are clean and tight. Remove all oxide from all conductors and terminals before connecting wiring.**



Step 3: Apply the Electric Rating Label

Apply the supplied Electrical Rating label to the left side of the terminal block cover, just above the terminal block.

NOTE: Leave the cover in the raised position to facilitate connection of the head assembly.

Electrical Rating
label



You are now ready to install the head assembly and top cap as described in Chapter 5.

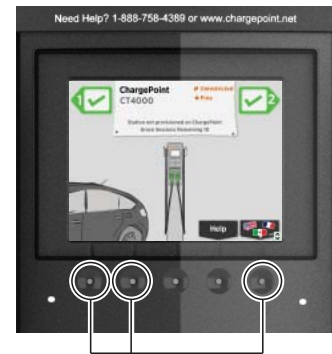
⚠ IMPORTANT: When you finish installing the station, you must manually configure the station's software for power sharing, as described on the next page. Otherwise, the circuit breaker will trip when both charging ports are used.

Step 4: Configure the Station for Power Sharing

Follow these steps to allow the station to be powered by a single circuit:

1. Display the station's Service Menu:

- If the station is not activated on ChargePoint, simultaneously press and hold the two leftmost buttons and the rightmost button for two seconds.
- If the station has been activated, scan your ChargePoint Service card



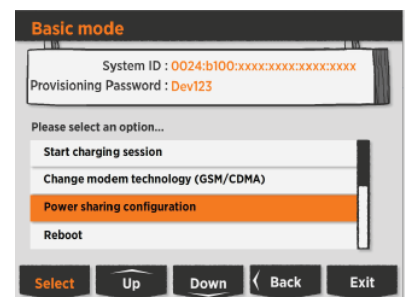
Simultaneously press and hold these three buttons for two seconds to display the Service

2. Select **Basic mode**.

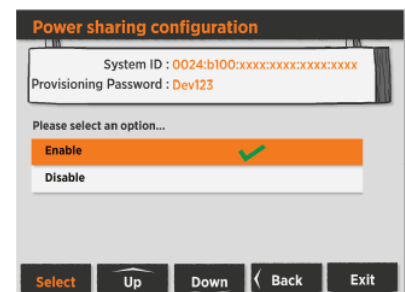
Press the button immediately below the menu item to choose the associated function



3. Select **Power Sharing Configuration**.



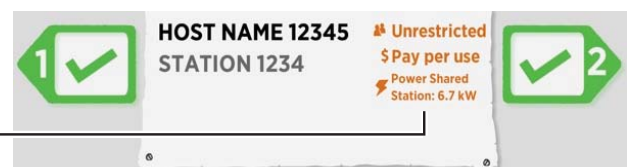
4. Select **Enable**.



5. Select **Exit** to leave the Service Menu.

6. Confirm that the station's display indicates that power sharing has been configured.

The station indicates that power sharing is configured



Limited Product Warranty



This Limited Product Warranty applies to you, a customer who has purchased CHARGEPOINT's Charging Stations and/or related products ("Products") from CHARGEPOINT, INC., or one of its authorized distributors and not for resale.

LIMITED ONE-YEAR WARRANTY: Subject to the exclusions from warranty coverage set forth below, CHARGEPOINT warrants that the Product will be free from any defects in materials and/or workmanship (the "Limited Warranty") for a period of one (1) year after the date of the initial installation of the Product (the "One-Year Warranty Period"). If the Product becomes defective in breach of the Limited Warranty, CHARGEPOINT will, upon written notice of the defect received during the One-Year Warranty period, either repair or replace, at ChargePoint's election, the Product if it proves to be defective; provided, that CHARGEPOINT will not be responsible for the cost of any labor associated with the repair or replacement of any defective Product.

TWO-, THREE-, FOUR- OR FIVE-YEAR EXTENDED WARRANTY (Additional Charge Applies): Subject to the exclusions from warranty coverage set forth below, if you have purchased an extended warranty, and if the Product becomes defective in breach of the Limited Warranty above at any time during the extended warranty period after the date of the initial installation of the Product, CHARGEPOINT will, upon written notice of the defect received during the extended warranty period, either repair, provide replacement parts for the defective parts of the Product or replace the Product, at ChargePoint's election, if it proves to be defective; provided, that CHARGEPOINT will not be responsible for the cost of any labor associated with the repair or replacement of any defective Product.

CHARGEPOINT's Options: You acknowledge that replacement products provided by CHARGEPOINT under each of the Limited Warranty and the Extended Warranty may be re-manufactured or reconditioned Products or, if the exact Product is no longer manufactured by CHARGEPOINT, a Product with substantially similar functionality ("Replacement Products"). Any Replacement Products so furnished will be warranted for the remainder of the original Warranty Period or ninety (90) days from the date of delivery of such Replacement Product, whichever is greater. Should CHARGEPOINT be unable to repair or replace the Product, CHARGEPOINT will refund the purchase price of the Product.

EXCLUSIONS FROM LIMITED WARRANTY AND EXTENDED WARRANTY

IMPORTANT: The Limited Warranty and, if purchased, the Extended Warranty on your Product shall not apply to defects, or service repairs, resulting from any of the following:

- Alteration or modification of the Product in any way not approved in writing by CHARGEPOINT.
- Vandalism.
- Abuse, damage or otherwise being subjected to problems caused by negligence (including but not limited to physical damage from being struck by a vehicle) or misapplication, or use of the Products other than as specified in the applicable CHARGEPOINT documentation.
- Installation or relocation of the Products unless performed by CHARGEPOINT or by a ChargePoint authorized installer or service provider.
- Improper site preparation or maintenance.
- Damage as a result of accidents, extreme power surge, extreme electromagnetic field, acts of nature or other causes beyond the control of CHARGEPOINT.
- Use of the Product with software, interfacing, parts or supplies not supplied by CHARGEPOINT.

You are responsible for the proper installation and maintenance of the Product. Any service or repairs beyond the scope of the Limited Warranty or the Extended Warranty above are subject to CHARGEPOINT's then prevailing current labor rates and other applicable charges.

Third Party Products. The Limited Warranty and Extended Warranty are exclusive of products manufactured by third parties ("Third Party Products"). If such third party manufacturer provides a separate warranty with respect to the Third Party Product, CHARGEPOINT will include such warranty in the packaging of the CHARGEPOINT Product.

OBTAINING WARRANTY SERVICE

To obtain warranty service you must: (a) obtain a return materials authorization number ("RMA#") from CHARGEPOINT by contacting 1-877-370-3802 (or for customers outside the U.S., contact 408-370-3802) and ask for Customer Service, and (b) deliver the Product, in accordance with the instructions provided by CHARGEPOINT, along with proof of purchase in the form of a copy of the bill of sale including the Product's serial number, contact information, RMA# and detailed description of the

defect, in either its original package or packaging providing the Product with a degree of protection equivalent to that of the original packaging, to CHARGEPOINT at the address below. You agree to obtain adequate insurance to cover loss or damage to the Product during shipment.

If you obtain an RMA# and return the defective Product as described above, CHARGEPOINT will pay the cost of returning the Product to CHARGEPOINT. Otherwise, you agree to bear such cost, and prior to receipt by CHARGEPOINT, you assume risk of any loss or damage to the Product. CHARGEPOINT is responsible for the cost of return shipment to you if the CHARGEPOINT Product is found to be defective.

Returned products which are found by CHARGEPOINT to be not defective, returned out-of-warranty or otherwise ineligible for warranty service will be repaired or replaced at CHARGEPOINT's standard charges and shipped back to you at your expense.

At CHARGEPOINT's sole option, CHARGEPOINT may perform repair service on the Product at your facility, and you agree to provide CHARGEPOINT with all reasonable access to such facility and the Product, as required. On-site repair service is not available outside the United States.

All replaced parts, whether under warranty or not, are the property of CHARGEPOINT.

WARRANTY LIMITATIONS

THE LIMITED WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED BY CHARGEPOINT, TO THE MAXIMUM EXTENT PERMITTED BY LAW. THERE ARE NO OTHER WARRANTIES RESPECTING THE PRODUCT AND DOCUMENTATION AND SERVICES PROVIDED UNDER THIS AGREEMENT, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF DESIGN, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (EVEN IF CHARGEPOINT OR DISTRIBUTOR HAS BEEN INFORMED OF SUCH PURPOSE) OR AGAINST INFRINGEMENT.

Some states or jurisdictions do not allow the exclusion of express or implied warranties so the above exclusions may not apply to you. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED UNDER APPLICABLE LAW, THEN SUCH IMPLIED WARRANTY SHALL BE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD DESCRIBED ABOVE. NO WARRANTIES APPLY AFTER THE TOTAL WARRANTY PERIOD. Some states or jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

NO AGENT OF CHARGEPOINT IS AUTHORIZED TO ALTER OR EXCEED THE WARRANTY OBLIGATIONS OF CHARGEPOINT.

CHARGEPOINT SPECIFICALLY DOES NOT WARRANT THAT ANY SOFTWARE WILL BE ERROR FREE OR OPERATE WITHOUT INTERRUPTION.

THE REMEDIES IN THIS LIMITED PRODUCT WARRANTY ARE YOUR SOLE AND EXCLUSIVE REMEDIES.

LIMITATIONS OF LIABILITY

You acknowledge and agree that the consideration which you paid to CHARGEPOINT or one of its authorized distributors does not include any consideration by CHARGEPOINT or one of its authorized distributors of the risk of consequential, indirect or incidental damages which may arise in connection with your use of, or inability to use, the Product. **THUS, CHARGEPOINT OR ONE OF ITS AUTHORIZED DISTRIBUTORS WILL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST BUSINESS, LOST DATA, LOSS OF USE, OR COST OF COVER INCURRED BY YOU ARISING OUT OF OR RELATED TO YOUR PURCHASE OR USE OF, OR INABILITY TO USE, THIS PRODUCT OR THE SERVICES, UNDER ANY THEORY OF LIABILITY, WHETHER IN AN ACTION IN CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY, EVEN IF C CHARGEPOINT KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, THE CUMULATIVE LIABILITY OF CHARGEPOINT OR ONE OF ITS AUTHORIZED DISTRIBUTORS FOR ALL CLAIMS WHATSOEVER RELATED TO THIS PRODUCT OR THE SERVICE WILL NOT EXCEED THE PRICE YOU PAID FOR THIS PRODUCT.**

THE LIMITATIONS SET FORTH HEREIN ARE INTENDED TO LIMIT THE LIABILITY OF CHARGEPOINT AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

Some states or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THIS LIMITED PRODUCT WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION.

ADDITIONAL INFORMATION

This Limited Product Warranty is valid for U.S.A. and Canada only.

This Limited Product Warranty shall be governed by and construed in accordance with the laws of the State of California, U.S.A., exclusive of its conflict of laws principles. The U.N. Convention on Contracts for the International Sale of Goods shall not apply.

This Limited Product Warranty is the entire and exclusive agreement between you and CHARGEPOINT with respect to its subject matter, and any modification or waiver of any provision of this statement is not effective unless expressly set forth in writing by an authorized representative of CHARGEPOINT.

The Limited Product Warranty is not transferable by you to anyone else.

All inquiries or claims made under this Limited Product Warranty must be sent to CHARGEPOINT's address as follows:

ChargePoint, Inc.
1692 Dell Avenue
Campbell, California 95008-6901
Tel: 408-370-3802
Fax: 408-370-3847
Email: service@chargepoint.com